EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	551500	phenyl	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/11 07:53
L2	2479	hexenoic	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/11 07:53
L3	40	L2 near5 L1	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/11 07:53
L4	176	(562/491).CCLS.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/12/11 07:53
L5	1461	(514/562).CCLS.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/12/11 07:53
L6	601	(514/564).CCLS.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/12/11 07:53
L7	1167	(514/570).CCLS.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/12/11 07:53
L8	361	(514/571).CCLS.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/12/11 07:53
L9	241	(562/495).CCLS.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/12/11 07:53
L10	654	(514/559).CCLS.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/12/11 07:53
L11	4257	L4 or L9 or L10 or L5 or L6 or L7 or L8	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/11 07:53

EAST Search History

L12	1	L3 and L11	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/11 07:53
L13	164286	cyclohexyl	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/11 07:53
L14	17	L3 and L13	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/11 07:53
L15	11	("4513005").URPN.	USPAT	OR	ON	2007/12/11 07:53
L16	0	"49047735"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/11 07:54
L17	0	("49047735").PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/12/11 07:55
L18	82	heptatrienoic	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/11 07:56
L19	23	l1 near20 l18	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/11 08:02
L20	666	pentadienoic	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/11 08:10
L21	93	l1 near20 l20	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/11 08:06
L22	35	"112429"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/11 08:06
L23	197168	("514").CLAS.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/12/11 08:10
L24	164	l20 and l23	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/11 08:29

EAST Search History

L25	2	("5675033").PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/12/11 08:13
L26	14	"6238649"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/11 10:11
L27	2	("5010189").PN.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	OFF	2007/12/11 10:11

```
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 NEWS  1          Web Page for STN Seminar Schedule - N. America
 NEWS  2  JUL 02  LMEDLINE coverage updated
 NEWS  3  JUL 02  SCISEARCH enhanced with complete author names
 NEWS  4  JUL 02  CHEMCATS accession numbers revised
 NEWS  5  JUL 02  CA/CAplus enhanced with utility model patents from China
 NEWS  6  JUL 16  CAplus enhanced with French and German abstracts
 NEWS  7  JUL 18  CA/CAplus patent coverage enhanced
 NEWS  8  JUL 26  USPATFULL/USPAT2 enhanced with IPC reclassification
 NEWS  9  JUL 30  USGENE now available on STN
 NEWS 10  AUG 06  CAS REGISTRY enhanced with new experimental property tags
 NEWS 11  AUG 06  FSTA enhanced with new thesaurus edition
 NEWS 12  AUG 13  CA/CAplus enhanced with additional kind codes for granted
                  patents
 NEWS 13  AUG 20  CA/CAplus enhanced with CAS indexing in pre-1907 records
 NEWS 14  AUG 27  Full-text patent databases enhanced with predefined
                  patent family display formats from INPADOCDB
 NEWS 15  AUG 27  USPATOLD now available on STN
 NEWS 16  AUG 28  CAS REGISTRY enhanced with additional experimental
                  spectral property data
 NEWS 17  SEP 07  STN AnaVist, Version 2.0, now available with Derwent
                  World Patents Index
 NEWS 18  SEP 13  FORIS renamed to SOFIS
 NEWS 19  SEP 13  INPADOCDB enhanced with monthly SDI frequency
 NEWS 20  SEP 17  CA/CAplus enhanced with printed CA page images from
                  1967-1998
 NEWS 21  SEP 17  CAplus coverage extended to include traditional medicine
                  patents
 NEWS 22  SEP 24  EMBASE, EMBAL, and LEMBASE reloaded with enhancements
 NEWS 23  OCT 02  CA/CAplus enhanced with pre-1907 records from Chemisches
                  Zentralblatt
 NEWS 24  OCT 19  BEILSTEIN updated with new compounds
 NEWS 25  NOV 15  Derwent Indian patent publication number format enhanced
 NEWS 26  NOV 19  WPIX enhanced with XML display format
 NEWS 27  NOV 30  ICSD reloaded with enhancements
 NEWS 28  DEC 04  LINPADOCDB now available on STN

 NEWS EXPRESS  19 SEPTEMBER 2007:  CURRENT WINDOWS VERSION IS V8.2,
               CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.

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 NEWS IPC8     For general information regarding STN implementation of IPC 8

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* * * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 06:07:53 ON 11 DEC 2007

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

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http://www.cas.org/support/stngen/stndoc/properties.html

=> 2,4-pentadieneoic acid/cn
L1 0 2,4-PENTADIENEOIC ACID/CN

=> e 2,4-pentadieneoic acid/cn
E1 1 2,4-PENTADIENENITRILE-5-D, 5-(6,6-DIMETHYL-1-CYCLOHEXEN-1-YL-2-D)-3-METHYL-, (E,E)-/CN
E2 1 2,4-PENTADIENENITRILE-5-D, 5-(6,6-DIMETHYL-1-CYCLOHEXEN-1-YL-2-D)-3-METHYL-, (Z,E)-/CN
E3 0 --> 2,4-PENTADIENEOIC ACID/CN
E4 1 2,4-PENTADIENEPEROXOIC ACID, 5-PHENYL-, 1,1-DIMETHYLETHYL ESTER/CN
E5 1 2,4-PENTADIENESELENOAMIDE, 2-(1,1-DIMETHYLETHYL)-N,N-DIETHYL-/CN
E6 1 2,4-PENTADIENESELENOAMIDE, N,N-DIETHYL-2-(TRIMETHYLSILYL)-/CN
E7 1 2,4-PENTADIENESELENOAMIDE, N,N-DIETHYL-3-METHYL-2-(TRIMETHYLSILYL)-, (E)-/CN
E8 1 2,4-PENTADIENESELENOAMIDE, N,N-DIETHYL-3-METHYL-2-(TRIMETHYLSILYL)-, (Z)-/CN
E9 1 2,4-PENTADIENETHIAL/CN
E10 1 2,4-PENTADIENETHIAL, (Z)-/CN
E11 1 2,4-PENTADIENETHIAL, 2-METHYL-/CN
E12 1 2,4-PENTADIENETHIAL, 3-HYDROXY-/CN

```
=> e 2,4-pentadienoic acid/cn
E1            1      2,4-PENTADIENOHYDROXAMIC ACID, 4-METHYL-5-(5-NITRO-2-FURYL)-
                     /CN
E2            1      2,4-PENTADIENOHYDROXAMIC ACID, N,5-DIPHENYL-/CN
E3            1 --> 2,4-PENTADIENOIC ACID/CN
E4            1      2,4-PENTADIENOIC ACID AMIDE/CN
E5            1      2,4-PENTADIENOIC ACID N-METHYLAMIDE/CN
E6            1      2,4-PENTADIENOIC ACID, (1R,2S)-2-PHENYLCYCLOHEXYL ESTER, (2E
                     )-REL-/CN
E7            1      2,4-PENTADIENOIC ACID, (1R,2S,5R)-5-METHYL-2-(1-METHYL-1-PHE
                     NYLETHYL)CYCLOHEXYL ESTER, (2E)-REL-/CN
E8            1      2,4-PENTADIENOIC ACID, (1R,2S,5R)-5-METHYL-2-(1-METHYLETHYL)
                     CYCLOHEXYL ESTER, (2E)-/CN
E9            1      2,4-PENTADIENOIC ACID, (2E)-/CN
E10           1      2,4-PENTADIENOIC ACID, (2E)-, COMPD. WITH 1-NAPHTHALENEMETHA
                     NAMINE (1:1)/CN
E11           1      2,4-PENTADIENOIC ACID, (2E)-, COMPD. WITH 1-NAPHTHALENEMETHA
                     NAMINE (1:1), HOMOPOLYMER/CN
E12           1      2,4-PENTADIENOIC ACID, (2E)-2,4-PENTADIENYL ESTER, (2E)-/CN

=> e 2,4-pentadienoic acid, 5-methyl/cn
E1            1      2,4-PENTADIENOIC ACID, 5-METHOXY-3-(PHENYLTHIO)-5-((TRIMETHY
                     LSILYL)OXY)-, METHYL ESTER/CN
E2            1      2,4-PENTADIENOIC ACID, 5-METHOXY-3-METHYL-, METHYL ESTER/CN
E3            0 --> 2,4-PENTADIENOIC ACID, 5-METHYL/CN
E4            1      2,4-PENTADIENOIC ACID, 5-METHYL-2-(1-METHYL-1-PHENYLETHYL)CY
                     CLOHEXYL ESTER, (1R-(1A,2B,5A))-/CN
E5            1      2,4-PENTADIENOIC ACID, 5-METHYL-2-(1-METHYLETHYL)CYCLOHEXYL
                     ESTER, (1R-(1A,2B,5A))-/CN
E6            1      2,4-PENTADIENOIC ACID, 5-NITRO-/CN
E7            1      2,4-PENTADIENOIC ACID, 5-NITRO-, (2E,4E)-/CN
E8            1      2,4-PENTADIENOIC ACID, 5-NITRO-, ETHYL ESTER/CN
E9            1      2,4-PENTADIENOIC ACID, 5-NITRO-, ETHYL ESTER, (E,E)-/CN
E10           1      2,4-PENTADIENOIC ACID, 5-NITRO-, ION(1-)/CN
E11           1      2,4-PENTADIENOIC ACID, 5-NITRO-, METHYL ESTER, (E,E)-/CN
E12           1      2,4-PENTADIENOIC ACID, 5-OXIRANYL-, METHYL ESTER, (E,E)-/CN

=> logoff hold
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                                 7.20       7.41

 SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 06:10:59 ON 11 DEC 2007

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LOGINID:SSSPTA1623PAZ

PASSWORD:
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SESSION RESUMED IN FILE 'REGISTRY' AT 06:15:06 ON 11 DEC 2007
FILE 'REGISTRY' ENTERED AT 06:15:06 ON 11 DEC 2007
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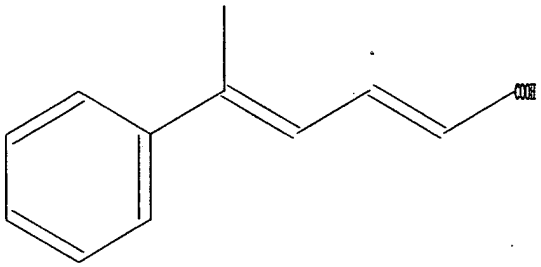
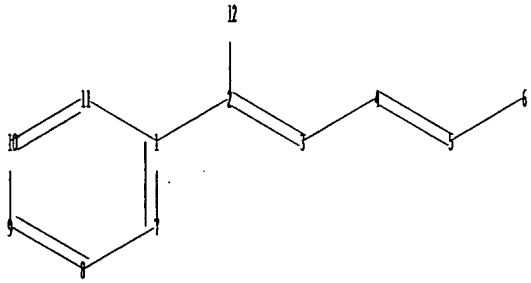
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                   ENTRY    SESSION
```

FULL ESTIMATED COST 7.20 7.41

=>
Uploading C:\Documents and Settings\PZucker\My Documents\Examination Auxillary files\10025947\10025947 pt V stab 1.str



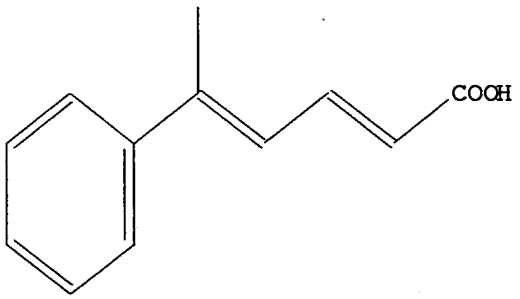


chain nodes :
2 3 4 5 6 12
ring nodes :
1 7 8 9 10 11
chain bonds :
1-2 2-3 2-12 3-4 4-5 5-6
ring bonds :
1-7 1-11 7-8 8-9 9-10 10-11
exact bonds :
1-2 2-3 2-12 3-4 4-5 5-6
normalized bonds :
1-7 1-11 7-8 8-9 9-10 10-11

Match level :
1:Atom 2:CLASS 3:CLASS 4:CLASS 5:CLASS 6:CLASS 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom 12:CLASS

L2 STRUCTURE UPLOADED

=> d l2
L2 HAS NO ANSWERS
L2 STR



Structure attributes must be viewed using STN Express query preparation.

=> search l2 exact sam
SAMPLE SEARCH INITIATED 06:16:19 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 9 TO ITERATE

100.0% PROCESSED 9 ITERATIONS 0 ANSWERS

SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 9 TO 360
PROJECTED ANSWERS: 0 TO 0

L3 0 SEA EXA SAM L2

=> search l2 exact full
FULL SEARCH INITIATED 06:16:26 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 115 TO ITERATE

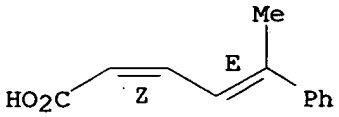
100.0% PROCESSED 115 ITERATIONS 3 ANSWERS
SEARCH TIME: 00.00.01

L4 3 SEA EXA FUL L2

=> d scan

L4 3 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN 2,4-Hexadienoic acid, 5-phenyl-, (Z,E)- (9CI)
MF C12 H12 O2

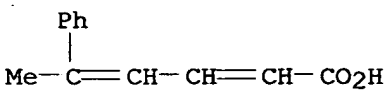
Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):3

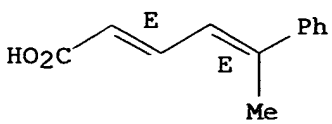
L4 3 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN Sorbic acid, 5-phenyl- (6CI)
MF C12 H12 O2



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L4 3 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN 2,4-Hexadienoic acid, 5-phenyl-, (E,E)- (9CI)
MF C12 H12 O2

Double bond geometry as shown.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	66.35	66.56

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FILE COVERS 1907 - 11 Dec 2007 VOL 147 ISS 25
FILE LAST UPDATED: 10 Dec 2007 (20071210/ED)

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=> l4
L5 9 L4

=> d l5 1-9 ti

L5 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI Structure-antitranspirant activity relation in a series of abscisic acid analogs

L5 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI Influence of the substituent and the geometry of the double bond on dissociation constants of cinnamylideneacetic acids

L5 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI Several dichlorobutadienyl alcohols and their transformation into dienic acids

L5 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI Synthesis of polyene acids and aldehydes derived from dichloroacrolein

L5 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI Ketones with a cyclopropane nucleus. II. Some 2-oxobenzobicyclo[0.1.4]hept-3-ene compounds substituted in position 5

L5 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI Ketones with a cyclopropane nucleus. I. Benzo- and

naphthobicyclo[0.1.4]heptenones

L5 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI Hydroxytriazenes of anthraquinone

L5 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI Stereochemistry of the 1-methyl-2-carboxy-1,2,3,4-tetrahydronaphthalenes and the 5-methylbenzobicyclo[0.1.4]-hept-3-en-2-ones

L5 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN
TI Reformatskii reactions with methyl γ-bromocrotonate

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	11.52	78.08

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DICTIONARY FILE UPDATES: 10 DEC 2007 HIGHEST RN 957336-90-2

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=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.45	78.53

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=> d his

     (FILE 'HOME' ENTERED AT 06:07:53 ON 11 DEC 2007)

     FILE 'REGISTRY' ENTERED AT 06:08:12 ON 11 DEC 2007
L1             0 2,4-PENTADIENEOIC ACID/CN
                 E 2,4-PENTADIENEOIC ACID/CN
                 E 2,4-PENTADIENOIC ACID/CN
                 E 2,4-PENTADIENOIC ACID, 5-METHYL/CN
L2               STRUCTURE UPLOADED
L3             0 SEARCH L2 EXACT SAM
L4             3 SEARCH L2 EXACT FULL

     FILE 'CAPLUS' ENTERED AT 06:16:55 ON 11 DEC 2007
L5             9 L4

     FILE 'REGISTRY' ENTERED AT 06:27:46 ON 11 DEC 2007

     FILE 'CAPLUS' ENTERED AT 06:28:11 ON 11 DEC 2007

=> file reg
COST IN U.S. DOLLARS                          SINCE FILE      TOTAL
                                                   ENTRY    SESSION
FULL ESTIMATED COST                                0.47      79.00

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DICTIONARY FILE UPDATES:  10 DEC 2007  HIGHEST RN 957336-90-2

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  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and
predicted properties as well as tags indicating availability of
experimental property data in the original document.  For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=> e 2,4-pentadienoic acid/cn
E1             1     2,4-PENTADIENOHYDROXAMIC ACID, 4-METHYL-5-(5-NITRO-2-FURYL)-
                     /CN
E2             1     2,4-PENTADIENOHYDROXAMIC ACID, N,5-DIPHENYL-/CN
```

```
E3            1 --> 2,4-PENTADIENOIC ACID/CN
E4            1     2,4-PENTADIENOIC ACID AMIDE/CN
E5            1     2,4-PENTADIENOIC ACID N-METHYLAMIDE/CN
E6            1     2,4-PENTADIENOIC ACID, (1R,2S)-2-PHENYLCYCLOHEXYL ESTER, (2E
                    )-REL-/CN
E7            1     2,4-PENTADIENOIC ACID, (1R,2S,5R)-5-METHYL-2-(1-METHYL-1-PHE
                    NYLETHYL)CYCLOHEXYL ESTER, (2E)-REL-/CN
E8            1     2,4-PENTADIENOIC ACID, (1R,2S,5R)-5-METHYL-2-(1-METHYLETHYL)
                    CYCLOHEXYL ESTER, (2E)-/CN
E9            1     2,4-PENTADIENOIC ACID, (2E)-/CN
E10           1     2,4-PENTADIENOIC ACID, (2E)-, COMPD. WITH 1-NAPHTHALENEMETHA
                    NAMINE (1:1)/CN
E11           1     2,4-PENTADIENOIC ACID, (2E)-, COMPD. WITH 1-NAPHTHALENEMETHA
                    NAMINE (1:1), HOMOPOLYMER/CN
E12           1     2,4-PENTADIENOIC ACID, (2E)-2,4-PENTADIENYL ESTER, (2E)-/CN

=> e3
L6            1 "2,4-PENTADIENOIC ACID"/CN

=> d l6

L6   ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2007 ACS on STN
RN   626-99-3  REGISTRY
ED   Entered STN:  16 Nov 1984
CN   2,4-Pentadienoic acid  (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN   α,γ-Pentadienoic acid (3CI)
OTHER NAMES:
CN   β-Vinylacrylic acid
CN   1,3-Butadiene-1-carboxylic acid
CN   1-Carboxy-1,3-butadiene
CN   1-Carboxybutadiene
CN   Butadiene-1-carboxylic acid
CN   NSC 16628
MF   C5 H6 O2
CI   COM
LC   STN Files:   BEILSTEIN*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS,
       CHEMINFORMRX, CHEMLIST, CSCHEM, DETHERM*, IFICDB, IFIPAT, IFIUDB,
       SPECINFO, TOXCENTER, USPAT2, USPATFULL, USPATOLD
         (*File contains numerically searchable property data)
     Other Sources:   EINECS**
         (**Enter CHEMLIST File for up-to-date regulatory information)
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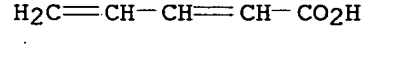

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**PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT**

            155 REFERENCES IN FILE CA (1907 TO DATE)
             14 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
            156 REFERENCES IN FILE CAPLUS (1907 TO DATE)
             12 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     7.35      86.35

FILE 'CAPLUS' ENTERED AT 06:29:37 ON 11 DEC 2007
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 11 Dec 2007 VOL 147 ISS 25
FILE LAST UPDATED: 10 Dec 2007 (20071210/ED)

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L7 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN
TI Use of pentadienoic acid derivatives for the treatment of hyperuricemia
AN 2005:523273 CAPLUS
DN 143:53517
TI Use of pentadienoic acid derivatives for the treatment of hyperuricemia
IN Boizel, Robert; Fouqueray, Pascale; Guerrier, Daniel; Zeiller, Jean-Jacques; Brutzkus, Bertrand
PA Merck Patent G.m.b.H., Germany
SO PCT Int. Appl., 64 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

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PATENT FAMILY INFORMATION:

FAN 2005:467780

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OS MARPAT 143:53517
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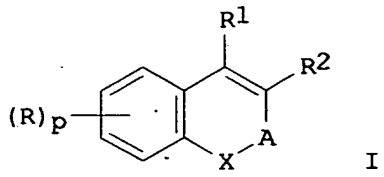

I

AB The use of a pentadienoic acid derivative of formula I (e.g., (2E,4E)-5-(3,3-dimethyl-7-methoxy-2,3-dihydrobenzoxepin-5-yl)-3-methylpenta -2,4-dienoic acid) is claimed for the preparation of a medicament for the prevention or treatment of hyperuricemia and/or one or several associated disorders or diseases, and/or for reducing the serum uric acid level of a subject. Medical compns. for these prevention and/or treatment, comprising such a pentadienoic acid derivative

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN
TI Use of pentadienoic acid derivatives for the prevention and/or the treatment of hyperuricemia
AN 2005:467780 CAPLUS
DN 143:1300
TI Use of pentadienoic acid derivatives for the prevention and/or the treatment of hyperuricemia
IN Boizel, Robert; Fouqueray, Pascale; Guerrier, Daniel; Zeller, Jean-Jacques; Brutzkus, Bertrand
PA Merck Sante, Fr.
SO Eur. Pat. Appl., 45 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 2

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PATENT FAMILY INFORMATION:

FAN 2005:523273

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OS MARPAT 143:1300

AB Use of pentadienoic acid derivs. for the prevention and/or the treatment of hyperuricemia and/or associated disorders or diseases. The use of a pentadienoic acid derivative of formula (I) for the preparation of a medicament for the prevention or treatment of hyperuricemia and/or one or several associated disorders or diseases, and/or for reducing the serum uric acid level of a subject. Medical compns. for these prevention and/or treatment, comprising such a pentadienoic acid derivative

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	23.45	109.80

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STRUCTURE FILE UPDATES: 10 DEC 2007 HIGHEST RN 957336-90-2
DICTIONARY FILE UPDATES: 10 DEC 2007 HIGHEST RN 957336-90-2

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http://www.cas.org/support/stngen/stndoc/properties.html

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FILE 'CAPLUS' ENTERED AT 06:32:27 ON 11 DEC 2007
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FILE COVERS 1907 - 11 Dec 2007  VOL 147 ISS 25
FILE LAST UPDATED: 10 Dec 2007  (20071210/ED)

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L8          33 L6/PREP
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TI   Diene syntheses. XXVI. A dimeric butadiene-1-carboxylic acid

L8   ANSWER 31 OF 33  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   2,4-Pentadienoic acids

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TI   Butadienyl compounds

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TI   A hypothesis on the biological origin of resin acids


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AU   Eglinton, G.; Jones, E. R. H.; Mansfield, G. H.; Whiting, M. C.
```

CS Univ. Manchester, UK
SO Journal of the Chemical Society (1954) 3197-3200
CODEN: JCSOA9; ISSN: 0368-1769
DT Journal
LA Unavailable
OS CASREACT 49:60249
AB cf. C.A. 49, 8142f. A study has been made of the effect of alkali on but-3-ynoic acid (I). Under the mild conditions of heating 3 hrs. at 40° with 18% K_2CO_3 solution, a 92% yield of buta-2,3-dienoic acid (II), m. 65-6° (from light petroleum) was obtained. More vigorous treatment (18% K_2CO_3 at 90° for 6 hrs.) gave further isomerization to but-2-ynoic acid (III), m. 75-6° (from light petroleum). Et but-3-ynoate (IV), b. 104-5°/190 mm., n19D 1.4291, isomerized much more readily than the acid. Even $KHCO_3$ solution at 50° gave Et buta-2,3-dienoate (V), b. 44°/130 mm., n19D 1.4585, and with 10% K_2CO_3 at 20°, the reaction went almost to completion. V was found to be extremely reactive toward nucleophilic reagents. Treating V with an EtOH solution of NaOEt gave Et β-ethoxycrotonate (VI). Piperidine also added to V to form Et β-piperidinocrotonate, b. 110° (bath temperature)/0.03 mm., n16D 1.5392, λmaximum 2870 A., ε = 24700. V and aniline yielded Et β-anilinocrotonate, b. 106°/0.5 mm., n16D 1.5820, λmaximum 3010 A., ε = 20400, and with p-phenetidine and V, there resulted Et β-p-ethoxyanilinocrotonate, m. 53-4°, λmaximum 2960 A., ε = 22800. When a solution of II in xylene was refluxed, there was gradual polymerization and a little dehydroacetic acid was isolated. Partial hydrogenation of II in EtOAc in the presence of 1.5% Pd on $CaCO_3$ gave cis-crotonic acid, which, on bromination, gave a 70% yield of threo-α,β-dibromobutyric acid, m. 58-9° (from pentane). Reaction of II and V with $LiAlH_4$ was also studied. II gave primarily vinylacetic acid, b. 85° (bath temperature)/16 mm., n23D 1.4218, and some but-3-en-1-ol, b. 112°/767 mm., n21D 1.4180; α-naphthylurethan, m. 76-7°. A similar reduction of V gave Et vinylacetate, b. 75°/130 mm., n21D 1.4110, and a small quantity of but-3-en-1-ol.

L8 ANSWER 29 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
TI 2,4-Pentadienoic acids
AN 1952:42374 CAPLUS
DN 46:42374
OREF 46:7114i
TI 2,4-Pentadienoic acids
PA N. V. de Bataafsche Petroleum Maatschappij
DT Patent
LA Unavailable
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI GB 668569		19520319	GB 1949-18473	19490713

AB See U.S. 2,515,595 (C.A. 44, 9979b).

L8 ANSWER 30 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
TI Diene syntheses. XXVI. A dimeric butadiene-1-carboxylic acid
AN 1951:26931 CAPLUS
DN 45:26931
OREF 45:4683e-i,4684a-d
TI Diene syntheses. XXVI. A dimeric butadiene-1-carboxylic acid
AU Alder, Kurt; Vogt, Wilhelm
CS Univ. Cologne, Germany
SO Ann. (1950), 570, 190-200
DT Journal
LA Unavailable
GI For diagram(s), see printed CA Issue.
AB cf. C.A. 44, 1066a. Details are given for the preparation and purification of

CH2:CHCH:CHCO2H (I), b12 102-3°, m. 72°, formed from CH2(CO2H)2 and acrolein. I (31 g.) refluxed 24 hrs. with 2% each methylene blue and p-(HO)2C6H4 in 155 g. xylene, followed by extraction with hot aqueous Na2CO3, acidification, and extraction with Et2O gave about 40% of a crystalline dimer (II), m. 147° (from AcOEt), and 40% of an oily mixture (III), together with a tacky polymeric mixture II (2 g.) heated 2 hrs. with 3.3 g. Br at 200°, followed by solution in aqueous Na2CO3, filtration, and debromination with Na-Hg and treatment at 0° with 5% KMnO4, gave o-HO2CC6H4CH2CH2CO2H, m. 165-6° (cf. Straus and Lemmel, C.A. 7, 1499). II (0.5 g.) warmed 2-3 min. with 15 parts concentrated H2SO4, rapidly cooled, poured on ice, and extracted with Et2O gave a mixture of 1,2-C6H4.CO.O.CHCH2CO2H, m. 152° (cf. Roth, C.A. 8, 2724) and a new hydrindonecarboxylic acid, C10H8O3 (IV), m. 222-3° (from AcOEt)(semicarbazone, decompose 285°), whose (impure) Me ester m. 102° [semicarbazone, C12H13O3N3, needles, decompose 259° (from AcOAm)]. Catalytic hydrogenation of II with PtO2 in AcOH proceeded at a constant rate (indicating absence of appreciable amts. of an isomer) and yielded a cis-dihydro derivative (V) of II, m. 128°; Me ester, oil. Refluxed 8 hrs. with 5 cc. 40% KOH, 1 g. V gave, after acidification, trans-HO2CCH.(CH2)4.CHCH:CHCO2H (VI), m. 180°, which oxidized with cold alkaline KMnO4 gave 1,2-(HO2C)2C6H10, m. 219-20° (Diels and Alder, C.A. 22, 1144). Refluxing VI with 50 parts 10% H2SO4 yielded the trans-lactone, C10H14O4, m. 119° and depressing the m.p. of V. Refluxing II 0.5 hr. with 5 parts 40% KOH, followed by acidification and Et2O extraction, gave the compound (VII), m. 136° and depressing the m.p. of II. When hydrogenated, VII gave V, but when II was refluxed 20 hrs. with 40% KOH, it yielded a dienedicarboxylic acid, HO2CC:C(CH:CHCO2H).CH2.CH2.CH2.CH2 (VIII), m. (poorly due to lactonization) 158-63° (from AcOH), readily isomerized by hot aqueous H2SO4 to CH2.(CH2)2.CH2.C:C.CH(CH2CO2H).O.CO, m. 114-15°. The latter wag unsatd. toward KMnO4, but failed to add H at room temperature when treated with PtO2 in AcOH. Under similar conditions, VIII proved difficult to hydrogenate; even after 3 days a portion (m. 157° from Et2O) remained unsatd. toward KMnO4, but was apparently not identical with VIII and remained unchanged on heating with aqueous H2SO4. The only hydrogenated portion obtained from VIII was converted through its acid chloride into 2-PhNHCOC6H10CH2CH2CONHPh, m. 212° (cf. Huckel, C.A. 19, 1269). III was a mixture of 75% mono- and 25% dibasic acids, which with concentrated H2SO4 gave IV. Catalytic hydrogenation of III gave small amts. of V and a brown oil, which when refluxed 24 hrs. with 40% KOH, diluted, and oxidize with 5% KMnO4, yielded about 10% 1,2-(HO2C)2C6H10. III with CH2N2 gave a mixture, of which the fraction b12 175-90° gave on saponification VIII and a compound m. 211° (yielding a hydrogenation product, m. 188°, not identical with VI); another fraction, b12 190-210°, when saponified gave small amts. of VIII.

L8 ANSWER 31 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
TI 2,4-Pentadienoic acids
AN 1950:52175 CAPLUS
DN 44:52175
OREF 44:9979b-d
TI 2,4-Pentadienoic acids
IN Geyer, Bradford P.; Ballard, Seaver A.
PA Shell Development Co.
DT Patent
LA Unavailable
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2515595		19500718	US 1948-39817	19480720

AB A 2,4-pentadienoic acid is produced by the liquid-phase condensation of an α-methylenealkanal with CH2:CO (I) in the presence of a basic catalyst. Thus, into CH2:CHCHO (II) 84 g. (containing 0.1% p-(HO)2C6H4 and

NaOAc 10 g. in Et2O 200 cc. at -30° is passed I (more than 52 g. in 4 hrs.), the mixture filtered, the filtrate distilled to remove II and Me2CO, the residue (128 g.) neutralized at 0° with aqueous NaOH, 300 cc. HCCl3 added, the mixture acidified with 25% HCl at 0°, the HCCl3 layer dried and distilled at 0.2 mm., and CH2:CHCH:CHCO2H, m. 71°, isolated by sublimation.

L8 ANSWER 32 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
TI Butadienyl compounds
AN 1937:25080 CAPLUS
DN 31:25080
OREF 31:3503h-i,3504a-c
TI Butadienyl compounds
IN Carothers, Wallace H.; Berchet, Gerard J.
PA E. I. du Pont de Nemours & Co.
DT Patent
LA Unavailable
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2073363		19370309	US 1932-640326	19321029

AB 4-Hydroxy-1,2-butadiene may be formed by heating 4-chloro-1,2-butadiene with an oxide or carbonate such as CaO or Na2CO3 in water at 60-90° for 15 hrs.; by fractional distillation, a purified product is obtained which is a colorless liquid b756 126-8° which has a powerful vesicant action on the skin and the vapor of which has a strongly irritating effect upon the mucous membranes. It tends to polymerize when heated. By reaction with Me2SO4, etc., alkyl ethers of the hydroxy-1,2-butadiene are formed, and aromatic ethers are formed from it by reaction with metallic phenolates. Details are also given of the production of 4-phenoxy-1,2-butadiene, esters such as the formic, acetic, trichloroacetic, succinic, benzoic, phthalic and p-nitrobenzoic esters, the chlorocarbonic ester, b57 66-8° and suitable for use in the preparation of urethans having medicinal properties or the production of different esters by reaction with an alc. or a phenol, and of the production of butadienyl thiocyanate, butadienyl chloride, butadienyl cyanide, β,δ-dimethoxyvaleronitrile, polymerized butadienyl cyanide, ethyl β-vinyl acrylate (which polymerizes to a rubber-like mass on heating to 100° for 10 hrs.), β-vinylacrylic acid and a polymer, various amines of 4-hydroxy-1,2-butadiene, α-N-naphthyl-N'-2,3-butadienyl-1-urea, m. 77°, di- and tri-(2,3-butadienyl)amines, mono(2,3-butadienyl)aniline, di(2,3-butadineyl)aniline, butadienylacetic acid, butadienylacetone, ethylbutadienylbarbituric acid, isomers and dehydration products of 4-hydroxy-1,2-butadiene, methyl, ethyl, butyl, heptyl, butadienyl and phenylethyl esters of butadienylacetic and of methylethenylpropionic acids, butadienyl mercaptan and butadienyl sulfide, phenyl-p-tolylbutadienylcarbinol, etc. The butadienylamines may be used for the manufacture of dyes and pharmaceutical chemicals and for inhibiting oxidation of substances such as rubber and natural unsatd. fatty oils. Numerous details of procedure and properties of the products obtained are given.

L8 ANSWER 33 OF 33 CAPLUS COPYRIGHT 2007 ACS on STN
TI A hypothesis on the biological origin of resin acids
AN 1925:26895 CAPLUS
DN 19:26895
OREF 19:3485f-h
TI A hypothesis on the biological origin of resin acids
AU Aschan, Ossian
SO Chemiker-Zeitung (1925), 49, 689-91
CODEN: CMKZAT; ISSN: 0009-2894
DT Journal

LA Unavailable
AB cf. C. A. 15, 3096; 17, 1228; 18, 2151. The formulas of terpenes, polyterpenes and resin acids are all multiples of isoprene, C5H8. Their formation from this common building stone by the action of enzymes appears more probable than the formation of resin acids by oxidation of terpenes. The rubber production by tropical plants and the presence of isoprene, isoamylene and isopentane in masut suggest that isoprene is a widely spread plant metabolite in all latitudes as well as in the prehistoric epoch. The following is the hypothetical formation of isoprene (I) and vinylacrylic acid (II) from the normal intermediates of enzymic carbohydrate decomposition: Acetone, dihydroxyacetone and pyruvic acid condense with AcH to aldols, which after their reduction to the glycols split off water. The condensation of 2-4 mols. I leads to all the mono- and diterpenes of the Pinus species (abietin, pinabietin, colophene). The condensation of 3 mols. I with 1 mol. II yields a hypothetical abietic acid, the structure of which resembles closely that of Virtannen's pinabietic acids.

=> d his

(FILE 'HOME' ENTERED AT 06:07:53 ON 11 DEC 2007)

FILE 'REGISTRY' ENTERED AT 06:08:12 ON 11 DEC 2007
L1 0 2,4-PENTADIENEOIC ACID/CN
E 2,4-PENTADIENEOIC ACID/CN
E 2,4-PENTADIENOIC ACID/CN
E 2,4-PENTADIENOIC ACID, 5-METHYL/CN
L2 STRUCTURE UPLOADED
L3 0 SEARCH L2 EXACT SAM
L4 3 SEARCH L2 EXACT FULL

FILE 'CAPLUS' ENTERED AT 06:16:55 ON 11 DEC 2007
L5 9 L4

FILE 'REGISTRY' ENTERED AT 06:27:46 ON 11 DEC 2007

FILE 'CAPLUS' ENTERED AT 06:28:11 ON 11 DEC 2007

FILE 'REGISTRY' ENTERED AT 06:29:04 ON 11 DEC 2007
E 2,4-PENTADIENOIC ACID/CN
L6 1 E3

FILE 'CAPLUS' ENTERED AT 06:29:37 ON 11 DEC 2007
L7 2 L6/THU

FILE 'REGISTRY' ENTERED AT 06:32:17 ON 11 DEC 2007

FILE 'CAPLUS' ENTERED AT 06:32:27 ON 11 DEC 2007
L8 33 L6/PREP

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	25.05	135.30
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
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DICTIONARY FILE UPDATES: 10 DEC 2007 HIGHEST RN 957336-90-2

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experimental property data in the original document. For information
on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

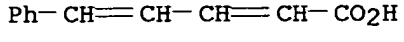
```
=> e 5-phenyl- 2,4-pentadienoic acid/cn
E1            1      5-PHENYL MELDRUM'S ACID/CN
E2            1      5-PHENYL(1,3,4)OXADIAZOLE-2-CARBONYL CHLORIDE/CN
E3            0 --> 5-PHENYL- 2,4-PENTADIENOIC ACID/CN
E4            1      5-PHENYL-(1,3,4)OXADIAZOLE-2-CARBOXYLIC ACID (4-FLUORO-3-(PY
                     RAZIN-2-YLOXYMETHYL)PHENYL)AMIDE/CN
E5            1      5-PHENYL-(1,3,4)OXADIAZOLE-2-CARBOXYLIC ACID N-(5-((BENZOYL)
                     (METHYL)AMINO)-1-(2-CARBAMOYLETHYL)-1H-BENZIMIDAZOL-2-YL)AMI
                     DE/CN
E6            1      5-PHENYL-(2E,4E)-PENTADIENOYL CHLORIDE/CN
E7            1      5-PHENYL-(3S)-HYDROXY-1-PENTYNE/CN
E8            1      5-PHENYL-1,10-PHENANTHROLINE/CN
E9            1      5-PHENYL-1,2,3,4-TETRAZOLE/CN
E10           1      5-PHENYL-1,2,3,4-THIATRIAZOLE/CN
E11           1      5-PHENYL-1,2,3,4-THIATRIAZOLE-3-OXIDE/CN
E12           1      5-PHENYL-1,2,3-THIADIAZOLE/CN

=> e 2,4-pentadienoic acid, 5-phenyl/cn
E1            1      2,4-PENTADIENOIC ACID, 5-PHENOXY-, ETHYL ESTER/CN
E2            1      2,4-PENTADIENOIC ACID, 5-PHENOXY-, METHYL ESTER/CN
E3            0 --> 2,4-PENTADIENOIC ACID, 5-PHENYL/CN
E4            2      2,4-PENTADIENOIC ACID, 5-PHENYL-/CN
E5            1      2,4-PENTADIENOIC ACID, 5-PHENYL-, ((2-METHYL-1-OXO-2-PROPENY
                     L)OXY)METHYL ESTER/CN
E6            1      2,4-PENTADIENOIC ACID, 5-PHENYL-, ((2-METHYL-1-OXO-2-PROPENY
                     L)OXY)METHYL ESTER, POLYMER WITH BUTYL 2-METHYL-2-PROPENOATE
                      AND 2-METHYL-2-PROPENOIC ACID/CN
E7            1      2,4-PENTADIENOIC ACID, 5-PHENYL-, (2,2'-BIPYRIDINE)-4,4'-DIY
                     LBIS(METHYLENE) ESTER, (2E,2'E,4E,4'E)-/CN
E8            1      2,4-PENTADIENOIC ACID, 5-PHENYL-, (2,4,6-TRIOXO-1,3,5-TRIAZI
                     NE-1,3,5(2H,4H,6H)-TRIYL)TRI-2,1-ETHANEDIYL ESTER/CN
E9            1      2,4-PENTADIENOIC ACID, 5-PHENYL-, (2,4-DICHLOROPHENYL)(DIETH
                     OXYPHOSPHINYL)METHYL ESTER, (2E,4E)-/CN
E10           1      2,4-PENTADIENOIC ACID, 5-PHENYL-, (2-CHLOROPHENYL)(DIETHOXYP
                     HOSPHINYL)METHYL ESTER, (2E,4E)-/CN
E11           1      2,4-PENTADIENOIC ACID, 5-PHENYL-, (2E)-4-ETHOXY-4-OXO-2-BUTE
                     N-1-YL ESTER, (2E,4E)-/CN
E12           1      2,4-PENTADIENOIC ACID, 5-PHENYL-, (2E,4E)-/CN

=> e4
L9            2 "2,4-PENTADIENOIC ACID, 5-PHENYL-"/CN
```

=> d 19

L9 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2007 ACS on STN
RN 54352-97-5 REGISTRY
ED Entered STN: 16 Nov 1984
CN 2,4-Pentadienoic acid, 5-phenyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Juarezic acid
MF C11 H10 O2
LC STN Files: BEILSTEIN*, CA, CAPLUS, CHEMINFORMRX, IFICDB, IFIUDB
(*File contains numerically searchable property data)



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FULL ESTIMATED COST	8.25	143.55

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CA SUBSCRIBER PRICE	0.00	-6.24

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FILE LAST UPDATED: 10 Dec 2007 (20071210/ED)

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=> 19
L10 158 L9

=> 9/thu
0 9/CT
960327 THU/RL

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L11           0 9/THU
                  (9/CT (L) THU/RL)

=> l9/thu
            158 L9
         960327 THU/RL
L12          10 L9/THU
                  (L9 (L) THU/RL)

=> d l12 1-10 ti

L12  ANSWER 1 OF 10  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Prosthetic implant materials containing donepezil, and artificial tissue
     containing the same

L12  ANSWER 2 OF 10  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Method for manufacturing tissue body with implant materials containing
     donepezil, and implant materials

L12  ANSWER 3 OF 10  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Visible light-curable materials and their use for wound healing promoters

L12  ANSWER 4 OF 10  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Physiologically active substance-coated stents, their manufacture, and
     sustained-release drug delivery using them

L12  ANSWER 5 OF 10  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Energy properties of statistical copolymer thin films as a measure of
     their biocompatibility with oncological medicine

L12  ANSWER 6 OF 10  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   The novel histone deacetylase inhibitor BL1521 inhibits proliferation and
     induces apoptosis in neuroblastoma cells

L12  ANSWER 7 OF 10  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Induction of histone acetylation and inhibition of growth by phenyl
     alkanoic acids and structurally related molecules

L12  ANSWER 8 OF 10  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Preparation of arylalkanoic acids and hydroxamic acids as histone
     deacetylase inhibitors for treatment of cancer, hematological disorders,
     and genetic related metabolic disorders

L12  ANSWER 9 OF 10  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Preparation of arylalkanoic acids and hydroxamic acids as histone
     deacetylase inhibitors for treatment of cancer, hematological disorders,
     and genetic related metabolic disorders

L12  ANSWER 10 OF 10  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   Structure-antibacterial activity relationship of some aromatic acids


=> d l12 6-10 ti fbib abs

L12  ANSWER 6 OF 10  CAPLUS  COPYRIGHT 2007 ACS on STN
TI   The novel histone deacetylase inhibitor BL1521 inhibits proliferation and
     induces apoptosis in neuroblastoma cells
AN   2004:733540  CAPLUS
DN   141:325331
TI   The novel histone deacetylase inhibitor BL1521 inhibits proliferation and
     induces apoptosis in neuroblastoma cells
AU   de Ruijter, Annemieke J. M.; Kemp, Stephan; Kramer, Gertjan; Meinsma,
     Rutger J.; Kaufmann, Judith O.; Caron, Huib N.; van Kuilenburg, Andre B.
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P.
CS Laboratory Genetic Metabolic Diseases, Department of Paediatrics/Emma Children's Hospital and Clinical Chemistry, Academic Medical Centre, University of Amsterdam, Amsterdam, 1100 DE, Neth.
SO Biochemical Pharmacology (2004), 68(7), 1279-1288
CODEN: BCPCA6; ISSN: 0006-2952
PB Elsevier B.V.
DT Journal
LA English
AB Neuroblastoma is a childhood cancer arising from the sympathetic nervous system. Disseminated neuroblastoma has a poor prognosis despite intensive multimodality treatment. Histone deacetylases (HDACs) were recently discovered as a potential target for pharmacol. gene therapy in cancer. HDACs have an important function in regulating DNA packaging in chromatin, thereby affecting the transcription of genes. In this paper, we tested the efficacy of a newly developed histone deacetylase inhibitor, BL1521, on neuroblastoma in vitro by investigating the changes in: acetylation of histone H3, in situ HDAC activity, p21WAF1/CIP1 and MYCN expression, metabolic activity, proliferation, morphol. and the amount of apoptosis present. BL1521 inhibited the in situ HDAC activity of a panel of neuroblastoma cell lines by at least 85%. Western anal. showed an increase of histone H3 acetylation in neuroblastoma cells after incubation with BL1521. Northern anal. showed an increase in the expression of p21WAF1/CIP1 and a decrease in the expression of MYCN in neuroblastoma cells after incubation with BL1521. Proliferation as well as the metabolic activity of neuroblastoma cells decreased significantly in response to treatment with BL1521, regardless of the MYCN status of the cells. BL1521 induced poly-(ADP-ribose) polymerase cleavage in a time- and dose-dependent manner, indicating the induction of apoptosis. Furthermore, when compared to the HDAC inhibitors Trichostatin A and 4-phenylbutyrate, BL1521 has an intermediate efficacy. Our results show that BL1521 is a potent inhibitor of HDAC and that HDACs are an attractive target for selective chemotherapy in neuroblastoma.
RE.CNT 38 THERE ARE 38 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN
TI Induction of histone acetylation and inhibition of growth by phenyl alkanoic acids and structurally related molecules
AN 2004:450167 CAPLUS
DN 142:32394
TI Induction of histone acetylation and inhibition of growth by phenyl alkanoic acids and structurally related molecules
AU Lea, Michael A.; Shareef, Asif; Sura, Monali; desBordes, Charles
CS Department of Biochemistry and Molecular Biology, UMDNJ-New Jersey Medical School, Newark, NJ, 07103, USA
SO Cancer Chemotherapy and Pharmacology (2004), 54(1), 57-63
CODEN: CCPHDZ; ISSN: 0344-5704
PB Springer-Verlag
DT Journal
LA English
AB Purpose. A structure-activity study was undertaken to determine the influence of side chain length of Ph alkanoic acids and the degree of unsatn. of Ph alkenoic acids on the induction of histone acetylation and inhibition of cancer cell proliferation. Materials and methods. Studies on cell proliferation were performed with DS19 mouse erythroleukemic cells, PC-3 human prostate cancer cells and Caco-2 human colon cancer cells. Actions on histone deacetylase and the induction of histone acetylation were compared for 4-phenylbutyrate and structurally related mols. Results. Increasing inhibition of cell proliferation by Ph alkanoic acids together with a decrease in cells in S phase and an increase in apoptotic cells was observed with increased chain length between four and ten carbons. Introduction of double bonds into the side chain was associated with

increased growth inhibition. In contrast, 4-phenylbutyrate was a more potent inhibitor of histone deacetylase and inducer of histone acetylation than the other Ph alkanoic acids examined Conclusions. In comparison with the action of 4-phenylbutyrate, actions other than inhibition of histone deacetylase appear to be more important for growth inhibition by longer chain Ph alkanoic and Ph alkenoic acids.

RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

TI Preparation of arylalkanoic acids and hydroxamic acids as histone deacetylase inhibitors for treatment of cancer, hematological disorders, and genetic related metabolic disorders

AN 2002:755220 CAPLUS

DN 137:262850

TI Preparation of arylalkanoic acids and hydroxamic acids as histone deacetylase inhibitors for treatment of cancer, hematological disorders, and genetic related metabolic disorders

IN Lan-Hargest, Hsuan-yin; Kaufman, Robert J.; Wiech, Norbert L.

PA USA

SO U.S. Pat. Appl. Publ., 19 pp.
CODEN: USXXCO

DT Patent

LA English

FAN.CNT 8

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
PI US 2002143052	A1	20021003	US 2001-812945		20010327
CA 2442366	A1	20021003	CA 2002-2442366		20020325
			US 2001-812940	A	20010327
			US 2001-812944	A	20010327
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			US 2001-812944	A1	20010327
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			US 2001-812944	A	20010327
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			WO 2002-US8836	W 20020325
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			US 2001-812944	A3 20010327
			US 2001-812945	A2 20010327
			US 2002-382075P	P 20020522
			US 2002-382077P	P 20020522
			US 2002-382089P	P 20020522
			US 2003-442175	A1 20030521
			US 2003-442177	A3 20030521
			US 2003-442191	A1 20030521
			US 2005-59377	A2 20050217
			US 2005-198293	A1 20050808

PATENT FAMILY INFORMATION:

FAN 2002:754352

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PI	WO 2002076941	A2	20021003	WO 2002-US8836	20020325
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	US 2002143196	A1	20021003	US 2001-812944	20010327
	US 6495719	B2	20021217		
	US 2002143052	A1	20021003	US 2001-812945	20010327
	US 2002143037	A1	20021003	US 2001-25947	20011226
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				US 2001-812944	A 20010327
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FAN 2002:755255

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				US 2003-442175	A1	20030521
				US 2003-442177	A3	20030521
				US 2003-442191	A1	20030521
				US 2005-59377	A2	20050217
				US 2005-198293	A1	20050808

FAN 2003:950833

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PI	WO 2003099272	A1	20031204	WO 2003-US15839	20030521
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RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,
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FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
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				US 2002-382089P	P 20020522
CA 2486303		A1	20031204	CA 2003-2486303	20030521
				US 2002-382089P	P 20020522
				WO 2003-US15839	W 20030521
AU 2003243272		A1	20031212	AU 2003-243272	20030521
				US 2002-382089P	P 20020522
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US 2004029922		A1	20040212	US 2003-442177	20030521
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EP 1511477		A1	20050309	EP 2003-755395	20030521

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				WO 2003-US15839	W 20030521
US 2005282890		A1	20051222	US 2005-198293	20050808
				US 2002-382089P	P 20020522
				US 2003-442177	A3 20030521

FAN 2003:950971

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003099760	A1	20031204	WO 2003-US15996	20030521

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UG, US, UZ, VN, YU, ZA, ZM, ZW
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KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,
FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,
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				US 2002-382075P	P 20020522
CA 2486385		A1	20031204	CA 2003-2486385	20030521
				US 2002-382075P	P 20020522
				WO 2003-US15996	W 20030521
AU 2003243285		A1	20031212	AU 2003-243285	20030521
				US 2002-382075P	P 20020522
				WO 2003-US15996	W 20030521
US 2004029903		A1	20040212	US 2003-442175	20030521
US 7193105		B2	20070320		
				US 2002-382075P	P 20020522
EP 1511715		A1	20050309	EP 2003-755410	20030521

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FAN 2003:950999

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2003099789	A1	20031204	WO 2003-US15838	20030521

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				US 2002-382077P	P 20020522
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				US 2002-382077P	P 20020522
				WO 2003-US15838	W 20030521
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				US 2002-382077P	P 20020522
				WO 2003-US15838	W 20030521
US 2004023944		A1	20040205	US 2003-442191	20030521
US 7214831		B2	20070508		
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EP 1511729		A1	20050309	EP 2003-755394	20030521

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				US 2002-382077P	P 20020522
				WO 2003-US15838	W 20030521

FAN 2004:453179

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004046104	A2	20040603	WO 2003-US36981	20031119
WO 2004046104	A3	20040805		

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TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

				US 2002-427567P	P 20021120
CA 2506504		A1	20040603	CA 2003-2506504	20031119
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				WO 2003-US36981	W 20031119
AU 2003291097		A1	20040615	AU 2003-291097	20031119
				US 2002-427567P	P 20021120
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				US 2002-427567P	P 20021120
				WO 2003-US36981	W 20031119
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				WO 2003-US36981	W 20031119
IN 2005DN02110		A	20070119	IN 2005-DN2110	20050518
				US 2002-427567P	P 20021120
				WO 2003-US36981	W 20031119

FAN 2004:701812

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004167184	A1	20040826	US 2003-715377	20031119
			US 2001-812940	B1 20010327
			US 2001-25947	A2 20011226
			US 2002-427567P	P 20021120
US 2002143037	A1	20021003	US 2001-25947	20011226
			US 2001-812940	B1 20010327

OS MARPAT 137:262850

AB Title compds. AY1LY2C(:X1)X2 (I) [wherein A = (un)substituted (hetero)cycloalkyl, (hetero)cycloalkenyl, (hetero)aryl; or A =

(un)substituted hydrocarbon chain interrupted by O, S, NRa, CO, NRaSO2, SO2NRa, NRaCO2, OCONRa, NRaCONRb, OCO, CO2, OSO2, SO2O, or OCO2; Y1 and Y2 = independently CH2, O, S, NRc, NRcCO2, OCONRc, NRcCONRd, OCO2, or a bond; Ra, Rb, Rc, and Rd = independently H, (hydroxy)alkyl, alkenyl, alkynyl, alkoxy, OH, or haloalkyl; L = (un)substituted straight hydrocarbon chain optionally containing at least one double and/or triple bond; X1 = O or S; X2 = OR1, SR1, NR3OR1, NR3SR1, CO2R1, CHR4OR1, N:NCON(R3)2, or OCHR4OCOR5; R1 and R2 = independently H, (hydroxy)alkyl, haloalkyl, or hydroxy protecting group; R3 = H, (hydroxy)alkyl, alkenyl, alkynyl,' alkoxy, OH, haloalkyl, or amino protecting group; R4 = OH, (hydroxy)alkyl, or haloalkyl; R5 = (hydroxy)alkyl or haloalkyl; provided that when L = Et or Pr and X2 = OR1, then Y1 ≠ a bond and Y2 ≠ a bond; or salts thereof] where prepared with Zn-binding moieties, such as hydroxamic acid or carboxylic acid groups, for inhibiting histone deacetylation activity in cells. For example, Et (trans)-cinnamate was treated with MeMgI in anhydrous ether to give 4-phenyl-2-methyl-3-buten-2-ol, which was converted to 3-methyl-5-phenyl-2,4-pentadienal using PO3Cl in DMF. Oxidation of the aldehyde with aqueous AgNO3 in EtOH afforded the desired 3-methyl-5-phenyl-2,4-pentadienoic acid (II). Test compds. of the invention showed potent inhibition of histone deacetylase with IC50 values in the low μM range; e.g. two test compds. showed IC50 values of 1.7 μM and 1.9 μM. Histone deacetylase inhibition can repress gene expression, including expression of genes related to tumor suppression. Thus, I provide an alternate route for treating cancer, hematol. disorders, e.g., hemoglobinopathies, and genetic related metabolic disorders, e.g., cystic fibrosis and adrenoleukodystrophy (no data).

L12 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN
TI Preparation of arylalkanoic acids and hydroxamic acids as histone deacetylase inhibitors for treatment of cancer, hematological disorders, and genetic related metabolic disorders
AN 2002:754352 CAPLUS
DN 137:262849
TI Preparation of arylalkanoic acids and hydroxamic acids as histone deacetylase inhibitors for treatment of cancer, hematological disorders, and genetic related metabolic disorders
IN Lan-Hargest, Hsuan-Yin; Kaufman, Robert J.; Wiech, Nobert L.
PA Circagen Pharmaceutical, USA
SO PCT Int. Appl., 66 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 8

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002076941	A2	20021003	WO 2002-US8836	20020325
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PATENT FAMILY INFORMATION:

FAN 2002:755220

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				US 2001-812945	A	20010327
				US 2001-25947	A	20011226
				WO 2002-US8836	W	20020325
	WO 2002076941	A2	20021003	WO 2002-US8836		20020325
	WO 2002076941	A3	20040212			
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				US 2001-812944	A1	20010327
				US 2001-812945	A1	20010327
				US 2001-25947	A1	20011226
	AU 2002250401	A1	20021008	AU 2002-250401		20020325
				US 2001-812940	A	20010327
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				US 2001-812945	A	20010327
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				WO 2002-US8836	W	20020325
	EP 1408946	A2	20040421	EP 2002-719311		20020325
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				US 2001-812944	A	20010327
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				US 2001-25947	A	20011226

				WO 2002-US8836	W	20020325
US 2003125306	A1	20030703	US 2002-318225			20021213
			US 2001-812945	A3		20010327
US 2005107348	A1	20050519	US 2004-19303			20041223
			US 2001-812945	A3		20010327
US 2005171208	A1	20050804	US 2005-59377			20050217
			US 2001-812945	A3		20010327
US 2007037869	A1	20070215	US 2006-489519			20060720
			US 2001-812944	A3		20010327
			US 2001-812945	A2		20010327
			US 2002-382075P	P		20020522
			US 2002-382077P	P		20020522
			US 2002-382089P	P		20020522
			US 2003-442175	A1		20030521
			US 2003-442177	A3		20030521
			US 2003-442191	A1		20030521
			US 2005-59377	A2		20050217
			US 2005-198293	A1		20050808

FAN 2002:755255

	PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
PI	US 2002143196	A1	20021003	US 2001-812944		20010327
	US 6495719	B2	20021217			
	CA 2442366	A1	20021003	CA 2002-2442366		20020325
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	WO 2002076941	A3	20040212			
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				US 2001-812940	A1	20010327
				US 2001-812944	A1	20010327
				US 2001-812945	A1	20010327
				US 2001-25947	A1	20011226
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				US 2001-812944	A	20010327
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	US 2003083521	A1	20030501	US 2002-307321		20021202
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	US 2007037869	A1	20070215	US 2006-489519		20060720
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				US 2001-812945	A2 20010327
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				US 2002-382089P	P 20020522
				US 2003-442175	A1 20030521
				US 2003-442177	A3 20030521
				US 2003-442191	A1 20030521
				US 2005-59377	A2 20050217
				US 2005-198293	A1 20050808

FAN 2003:950833

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003099272	A1	20031204	WO 2003-US15839	20030521
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				US 2002-382089P	P 20020522
	CA 2486303	A1	20031204	CA 2003-2486303	20030521
				US 2002-382089P	P 20020522
				WO 2003-US15839	W 20030521
	AU 2003243272	A1	20031212	AU 2003-243272	20030521
				US 2002-382089P	P 20020522
				WO 2003-US15839	W 20030521
	US 2004029922	A1	20040212	US 2003-442177	20030521
	US 7057057	B2	20060606		
				US 2002-382089P	P 20020522
	EP 1511477	A1	20050309	EP 2003-755395	20030521
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				US 2002-382089P	P 20020522
				WO 2003-US15839	W 20030521
	US 2005282890	A1	20051222	US 2005-198293	20050808
				US 2002-382089P	P 20020522
				US 2003-442177	A3 20030521

FAN 2003:950971

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003099760	A1	20031204	WO 2003-US15996	20030521
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				US 2002-382075P	P 20020522
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				US 2002-382075P	P 20020522
				WO 2003-US15996	W 20030521
	AU 2003243285	A1	20031212	AU 2003-243285	20030521
				US 2002-382075P	P 20020522
				WO 2003-US15996	W 20030521
	US 2004029903	A1	20040212	US 2003-442175	20030521

	US 7193105	B2	20070320		
				US 2002-382075P	P 20020522
	EP 1511715	A1	20050309	EP 2003-755410	20030521
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
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				WO 2003-US15996	W 20030521

FAN 2003:950999

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PI	WO 2003099789	A1	20031204	WO 2003-US15838	20030521
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				WO 2003-US15838	W 20030521
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				WO 2003-US15838	W 20030521

FAN 2004:453179

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PI	WO 2004046104	A2	20040603	WO 2003-US36981	20031119
	WO 2004046104	A3	20040805		
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				US 2002-427567P	P 20021120
	CA 2506504	A1	20040603	CA 2003-2506504	20031119
				US 2002-427567P	P 20021120
				WO 2003-US36981	W 20031119
	AU 2003291097	A1	20040615	AU 2003-291097	20031119
				US 2002-427567P	P 20021120
				WO 2003-US36981	W 20031119
	EP 1567142	A2	20050831	EP 2003-783686	20031119
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				US 2002-427567P	P 20021120
				WO 2003-US36981	W 20031119

	JP 2006508986	T	20060316	JP 2004-553939		20031119
				US 2002-427567P	P'	20021120
				WO 2003-US36981	W	20031119
	IN 2005DN02110	A	20070119	IN 2005-DN2110		20050518
				US 2002-427567P	P	20021120
				WO 2003-US36981	W	20031119

FAN 2004:701812

	PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
PI	US 2004167184	A1	20040826	US 2003-715377		20031119
				US 2001-812940	B1	20010327
				US 2001-25947	A2	20011226
				US 2002-427567P	P	20021120
	US 2002143037	A1	20021003	US 2001-25947		20011226
				US 2001-812940	B1	20010327

OS MARPAT 137:262849

AB Title compds. AY1LY2C(:X1)X2 (I) [wherein A = (un)substituted (hetero)cycloalkyl, (hetero)cycloalkenyl, (hetero)aryl; or A = (un)substituted hydrocarbon chain interrupted by O, S, NRa, CO, NRaSO2, SO2NRa, NRaCO2, OCONRa, NRaCONRb, OCO, CO2, OSO2, SO2O, or OCO2; Y1 and Y2 = independently CH2, O, S, NRc, NRcCO2, OCONRc, NRcCONRd, OCO2, or a bond; Ra, Rb, Rc, and Rd = independently H, (hydroxy)alkyl, alkenyl, alkynyl, alkoxy, OH, or haloalkyl; L = (un)substituted straight hydrocarbon chain optionally containing at least one double and/or triple bond; X1 = O or S; X2 = OR1, SR1, NR3OR1, NR3SR1, CO2R1, CHR4OR1, N:NCON(R3)2, or OCHR4OCOR5; R1 and R2 = independently H, (hydroxy)alkyl, haloalkyl, or hydroxy protecting group; R3 = H, (hydroxy)alkyl, alkenyl, alkynyl, alkoxy, OH, haloalkyl, or amino protecting group; R4 = OH, (hydroxy)alkyl, or haloalkyl; R5 = (hydroxy)alkyl or haloalkyl; provided that when L = Et or Pr and X2 = OR1, then Y1 ≠ a bond and Y2 ≠ a bond; or salts thereof] where prepared with Zn-binding moieties, such as hydroxamic acid or carboxylic acid groups, for inhibiting histone deacetylation activity in cells. For example, Et (trans)-cinnamate was treated with MeMgI in anhydrous ether to give 4-phenyl-2-methyl-3-buten-2-ol, which was converted to 3-methyl-5-phenyl-2,4-pentadienal using PO3Cl in DMF. Oxidation of the aldehyde with aqueous AgNO3 in EtOH afforded the desired 3-methyl-5-phenyl-2,4-pentadienoic acid (II). Test compds. of the invention showed potent inhibition of histone deacetylase with IC50 values in the low μM range; e.g. two test compds. showed IC50 values of 1.7 μM and 1.9 μM. Histone deacetylase inhibition can repress gene expression, including expression of genes related to tumor suppression. Thus, I provide an alternate route for treating cancer, hematol. disorders, e.g., hemoglobinopathies, and genetic related metabolic disorders, e.g., cystic fibrosis and adrenoleukodystrophy (no data).

L12 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2007 ACS on STN

TI Structure-antibacterial activity relationship of some aromatic acids

AN 1998:797015 CAPLUS

DN 130:194161

TI Structure-antibacterial activity relationship of some aromatic acids

AU Abeytunga, D. T. U.; Peiris, T. E. M.; Wijesundera, R. L. C.

CS Department of Chemistry, University of Colombo, Colombo, 3, Sri Lanka

SO Journal of the National Science Council of Sri Lanka (1998), 26(2), 133-139

CODEN: JNSCBH; ISSN: 0300-9254

PB Natural Resources, Energy and Science Authority of Sri Lanka

DT Journal

LA English

AB Nine aromatic acids were tested for their antibacterial effect against Staphylococcus aureus. 3-Phenylpropanoic acid was identified as the most active of the acids chosen for this bioassay. In general a 3,4-methylenedioxy substituent on the Ph group reduces the activity against Staphylococcus aureus.

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              ALL CITATIONS AVAILABLE IN THE RE FORMAT


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FIELD CODES CANNOT BE CHANGED HERE
You may have tried to apply a field code to a term that already has a
field code.  You can only add a field code to a term that has no field
code appended to it.

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                 E 2,4-PENTADIENOIC ACID/CN
                 E 2,4-PENTADIENOIC ACID, 5-METHYL/CN
L2               STRUCTURE UPLOADED
L3             0 SEARCH L2 EXACT SAM
L4             3 SEARCH L2 EXACT FULL

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L5             9 L4

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     FILE 'CAPLUS' ENTERED AT 06:28:11 ON 11 DEC 2007

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L6             1 E3

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L8            33 L6/PREP

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                 E 2,4-PENTADIENOIC ACID, 5-PHENYL/CN
L9             2 E4

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L11            0 9/THU
L12           10 L9/THU

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L13         52 L9/PREP
                (L9 (L) PREP/RL)

=> l13 not l12
L14         49 L13 NOT L12

=> d l14 39-49 ti
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L14 ANSWER 39 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI The mechanism of the reaction of bromine with 2,2-diphenylpenten-4-oic acid and its esters

L14 ANSWER 40 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Reduction of unsaturated acid amides to unsaturated aldehydes; a contribution to the synthesis of polyene chains

L14 ANSWER 41 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Diene syntheses. XXIX. Diene syntheses with unsymmetrical addends; the 1,4-disubstituted diene type

L14 ANSWER 42 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Unsaturated organic compounds

L14 ANSWER 43 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Condensation of aldehydes with malonic acid. XIX. Condensation of cinnamaldehyde

L14 ANSWER 44 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Synthesis of some 5-substituted 5-hydroxy-2-pentenoic acids

L14 ANSWER 45 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Reformatsky condensations involving vinylogs of haloacetic esters

L14 ANSWER 46 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI o-Methoxyphenylmalonic acid and its derivatives

L14 ANSWER 47 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI General synthesis of α-unsaturated acids from malonic acid

L14 ANSWER 48 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Polymerization of allyl cinnamalacetate

L14 ANSWER 49 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI The distillation products of α-truxilic acid. Obtainment of a fourth truxillic acid

=> d l14 39,40, 41, 47-49 ti fbib abs

L14 ANSWER 39 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI The mechanism of the reaction of bromine with 2,2-diphenylpenten-4-oic acid and its esters
AN 1953:18972 CAPLUS
DN 47:18972
OREF 47:3271d-e
TI The mechanism of the reaction of bromine with 2,2-diphenylpenten-4-oic acid and its esters
AU Lindsay, Kenneth L.
CS Univ. of Minnesota, Minneapolis
SO (1952) 92 pp. Avail.: Univ. Microfilms (Ann Arbor, Mich.), Order No. 4341 From: Dissertation Abstracts 12, 814-15
DT Dissertation
LA Unavailable
AB Unavailable

L14 ANSWER 40 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Reduction of unsaturated acid amides to unsaturated aldehydes; a contribution to the synthesis of polyene chains
AN 1953:18971 CAPLUS
DN 47:18971
OREF 47:3270c-i,3271a-d

TI Reduction of unsaturated acid amides to unsaturated aldehydes; a contribution to the synthesis of polyene chains
AU Wittig, Georg; Hornberger, Paul
CS Univ. Tubingen, Germany
SO Ann. (1952), 577, 11-25
DT Journal
LA Unavailable
OS CASREACT 47:18971
AB Mixed at -78° and then heated 24 hrs. at 125° in a sealed tube (or autoclave), 2.7 g. LiH and 7.1 g. BF3.Et2O in absolute Et2O gave 4 g. LiBH4.Et2O (I), extremely hygroscopic, forming a solution without decomposing Heated at 33°, I lost Et2O, giving LiBH4, m. 278-9°, exploding when heated in a free flame. Similarly formed from NaH was NaBH4, insol. in Et2O, soluble in iso-PrNH2. Heated under N at 175°, 11.5 g. B(OBu)3 (II) and 0.4 g. LiH, followed by Et2O addition, gave 10 g. Li[BH(OBu)3].0.5Et2O (III), rectangles, decomposing in air, yielding H with H2O or alc., soluble in tetrahydrofuran (IIIa), slightly soluble in Et2O and C6H6, practically insol. in dioxane. II heated with excess LiH gave I. Techniques for analyzing the various Li derivs. are outlined. Ph2Zn (2.2 g.) and 0.8 g. LiH warmed to 90°, treated with Et2O, and "dried" over paraffin gave 2.5 g. Li[ZnHPh2].Et2O, having solubilities similar to those of III. Ph2Be from Ph2Hg (cf. C.A. 45, 5556b) was freed from xylene by distillation under N, taken up in Et2O, and separated from BeHg, giving Ph2Be.2Et2O (IV), cubes, m. 28-32°, losing Et2O when heated in vacuo at 130°. IV (3.1 g.) and 0.8 g. LiH under N at 160-5°, followed by Et2O extraction, gave Li(BeHPh2).Et2O, rhombs (stored under N), decomposing in air with evolution of heat and light, giving H on treatment with H2O. PhCH:CHCOCl (V) (8.4 g.) and Ph2NH in absolute Et2O gave 13.3 g. PhCH:CHCONPh2 (VI), m. 152-3°. VI (3 g.) suspended in 15 cc. dry Et2O, heated 1 hr. with M I, and treated with aqueous HCl was not reduced, but gave 90% of a stereoisomeric or polymorphic modification (VII) of VI, leaflets, m. 191-2°, which, when inoculated at 130° with VI, gave the latter. However molten VI was not converted into VII by inoculation. VII was also obtained by heating VI with LiAlH4 (VIII) in IIIa or Et2O, unless a large excess VIII was used, whereupon VII was no longer formed, but 37% PhCH:CHCH2OH, b0.1 135-8° (phenylurethan, m. 89-91°), was obtained (in the Et2O extract). V (18.3 g.) and 16.7 g. carbazole (IX), stirred 0.5 hr. at 200°, cooled, triturated with 100 cc. MeOH, and cooled to 0°, gave 21 g. 9-cinnamoyl derivative (X) of IX, m. 96-6.5°. With VIII, X in Et2O at 0°, followed by addition of PhNHNH2, gave a mixture of 2.55 g. PhCH:CHCH:NNHPh, m. 166-7°, and IX (subliming from the mixture at 0.1 mm. and 120°). Ph(CH:CH)2COCl in absolute Et2O and Me2NH.HCl, treated dropwise with concentrated aqueous KOH, gave 88% Ph(CH:CH)2CONMe2 (XI), m. 109-10° (from C6H6-petr. ether). XI was not reduced by I or VIII, but with VIII gave an unstable isomer of XI (cis-trans?), m. 70-2° (from cyclohexane in the dark), reconverted into XI on standing or on repeated crystallization Ph(CH:CH)2COCl (9.6 g.) heated with 8.4 g. IX in xylene gave 10.1 g. 9-Ph-(CH:CH)2CO derivative (XII) of IX, lemon-yellow leaflets, m. 124-5°. I heated with XII in Et2O, followed by addition of aqueous HCl, gave 62% Ph(CH:CH)2CHO (phenylhydrazone, m. 177-9°), also formed in 72.9% yield by heating XII with VIII. Ph(CH:CH)3CHO, m. 114-15° (18.4 g.), refluxed 3 hrs. with 13.5 g. CH2(CO2H)2 in 100 cc. pyridine and 1 cc. piperidine, poured into an excess aqueous H2SO4, and the resulting precipitate decarboxylated by heating 1 hr. with 100 cc. Ac2O gave 52% Ph(CH:CH)4CO2H, yellow leaflets, m. 213-14° (from AcOH, then xylene), whose acid chloride (hygroscopic crystals) with the K derivative of IX in xylene gave 68% of the 9-Ph(CH:CH)4CO derivative (XIII) of IX, yellow needles, m. 190.5-91.5° (after crystallization from AcOEt, followed by solution in HCONMe2 and precipitation with alc.). The K derivative of IX and HO2CCH2COCl gave the 9-carboxyacetyl derivative (XIV) of IX, m. 135-7° (loss of CO2) (from

Et2O, precipitated with petr. ether). Ph(CH:CH)3CHO and XIV in cold pyridine, treated with a few drops each of piperidine and AcOH and heated 2 hrs. at 70-80°, gave CO2 and (after cooling to 0°) XIII. Reduction of 10 millimoles XIII in 30 cc. IIIa with 2.5 cc. molar VIII in Et2O gave after acidification and CHCl3 extraction, 1.42 g. IX and, in the extract, 1.7 g.

Ph(CH:CH)4CHO (XV), carmine, m. 141-3° (after sublimation at 130° and 0.1 mm.); phenylhydrazone, m. 224-6° (from HCONMe2). The reduction of XIII was also carried out with other hydrides, giving the following yields (%) of XV: with I 69, III 68, Li(ZnHPh2) 45, and Li(BeHPh2), 37. XV was separated from its contaminants by the use of Girard reagent D. In all cases 74-80% IX was also isolated. XIV and Ph(CH:CH)5CHO, m. 181-3°, under the above conditions, gave the Ph(CH:CH)6CO derivative of IX, dark red needles, m. 206-7° (from HCONMe2), which was reduced with VIII to 91% IX and 60% Ph(CH:CH)6CHO, carmine, m. 210-13° (subliming at 180° and 0.01 mm.) [phenylhydrazone, m. about 250° (decomposition)]. AcONMe2 failed to react with PhCH:CHCHO in the presence of EtOK. The 9-Ac derivative of IX treated with PhCH:CHCHO and KOEt at 0° followed by acidification in EtOH, gave 94% IX and only about 1% (impure) XII. On the other hand, PhCH:CHCHO and 9-acetyl-4-nitrocarbazole (XVI) in absolute EtOH with KOEt gave, on acidification, 74% 4-NO2 derivative of IX, m. 208-10°, 14% XVI, and, from the alc. mother liquors, after evaporation, extraction with Et2O, extraction of the Et2O layer (XVII) with aqueous Na2CO3, and acidification, 21% Ph(CH:CH)2CO2H, m. 163-4° (from C6H6). XVII extracted with aqueous NaHSO3 yielded 62% PhCH:CHCHO. 30 references.

L14 ANSWER 41 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Diene syntheses. XXIX. Diene syntheses with unsymmetrical addends; the 1,4-disubstituted diene type
AN 1951:26934 CAPLUS
DN 45:26934
OREF 45:4686d-i,4687a-f
TI Diene syntheses. XXIX. Diene syntheses with unsymmetrical addends; the 1,4-disubstituted diene type
AU Alder, Kurt; Schumacher, Marianne; Wolff, Oswald
CS Univ. Cologne, Germany
SO Ann. (1950), 570, 230-50
DT Journal
LA Unavailable
OS CASREACT 45:26934
AB The 1,4-substituted dienes used in these expts. were all of the trans, trans form. PhCH:CHCH:CHMe (I) (24 g.) and 18 g. CH2:CHCO2H (II) with traces of o-C6H4(OH)2 in 100 cc. PhMe refluxed 6 hrs. gave a mixture of the following 3 isomers (in the ratio of 8:1:1): 2-cis-Phenyl-5-cis-methylΔ3-tetrahydro-cis-benzoic acid (III), m. 159° (from AcOEt)(the main product); a 3-phenyl-6-methyl-Δ4-tetrahydrobenzoic acid (IV), m. 144-6° (from MeCN); and, from the mother liquors of IV, the 2-cis-phenyl-5-cis-methyl-Δ4-tetrahydro-trans-benzoic acid (V), m. 90-1° (from AcOEt). Dehydrogenation of III with S at 230-40° gave the new 2,5-PhMeC6H3CO2H, m. 155° (from MeCN), the crude acid chloride of which, refluxed 3.5 hrs. in 100 cc. CS2 with pure AlCl3, gave 2-methyl-9-fluorenone, m. 92° (cf. Kruber, C.A. 26, 5936). Catalytic hydrogenation of III gave a cis-dihydro derivative (VI), C14H18O2, m. 135-6°. The Me ester of VI refluxed with EtONa gave the trans-isomer of VI, m. 87° (also formed by the catalytic hydrogenation of V). Dehydrogenation of IV gave the new 3,6-PhMeC6H3CO2H, m. 209-10°. Catalytic hydrogenation of IV gave the dihydro derivative, C14H18O2, m. 142-3°. MeCH:CHCH:CHCO2H (VII)(11.2 g.), 8 g. II, and a trace of o-C6H4(OH)2, heated 5 hrs. at 135°, yielded (after digestion with Me2CO) small amts. of insol. polymers and approx. equal-amts. of the mechanically separated 5-cis-methyl-Δ3-tetrahydro-

cis,cis-o-phthalic acid (VIII), m. 193-4°, and 6-cis-methyl-Δ4-tetrahydro-cis,cis-isophthalic acid (IX), m. 174° (both from AcOEt), together with small amts. of an oil, which, when dehydrogenated, gave only 2,4-(HO2C)2C6H3Me. Dehydrogenation of VIII gave 3,4-(HO2C)2C6H3Me. Hydrogenation of VIII gave the saturated cis-dihydro derivative, C9H14O4, m. 173° (decomposition), which when heated 5 hrs. at 180° with 20 parts fuming HCl gave the trans-isomer, m. 176°, markedly depressing the m.p. of the cis form. The di-Me ester of VIII (properties not given), refluxed with 10% EtONa in EtOH, followed by acidification, gave an isomeric "C-acid" (X), C9H12O4, m. 228° (after Et2O extraction and crystallization from AcOEt), giving a new trans-dihydro derivative, m. 178-9°, marked by depressing the m.p. of other dihydro derivs. Dehydrogenation of IX gave 2,4-(HO2C)2C6H3Me (di-Me ester, m. 79°). With NaOEt (as above) IX was in small part converted into the isomeric "m-D-acid" (XI), m. 276-8° (cf. Wagner-Jauregg and Helmert, C.A. 33, 1269.3, who give 280°). Hydrogenation of IX gave a dihydro derivative, m. 195-6°, which with fuming HCl was rearranged into the isomeric dihydro derivative of XI, m. 202-3° (also obtained by direct hydrogenation of XI). These rearrangements are discussed, but not fully explained. Refluxing the acid chloride (XII) of VII with CH2:CHCOCl 7 hrs. in PhMe (or in a bomb tube at 125°), followed by addition of H2O, yielded a mixture of VIII and IX (but no XI). Similarly, refluxing in xylene, followed by distillation and hydrolysis, gave a mixture of 4 acids: 60% XI (crystallizing directly from the aqueous hydrolyzate) and (on concentrating the aqueous solution), VIII, X, and a small amount of an (unanalyzed) acid, m. 208°, as well as an oil, which dehydrogenated to 2,4-(HO2C)2C6H3Me. XII and CH2:CHCOCl heated at 155° in a bomb tube gave results similar to those obtained in xylene (with somewhat improved yields). The Me ester of VII and CH2:CHCO2Me with a trace of o-C6H4(OH)2, heated 5 hrs. at 145-50° gave a product (XIII), b13 156-60°, saponified to XI. Hydrogenation of XIII in AcOEt, and saponification gave dihydro derivs. of VIII and IX, in approx. equal amts., and small amts. of an oil, dehydrogenated to 3,4-(HO2C)2C6H3Me. trans,trans-PhCH:CHCH:CHCOCl (10 g.) and 10 g. CH2:CHCOCl kept 30 days at room temperature, then vigorously stirred with Me2CO and H2O, yielded (besides 5 g. PhCH:CHCH:CHCO2H, m. 164°), 4.5 g. 4-cis-phenyl-Δ5-tetrahydro-cis,cis-isophthalic acid (XIV), m. 222° (from aqueous AcOH). The same reactants (18 g. and 11 g., resp.) heated 72 hrs. at 90-100°, followed by hydrolysis, formed 80% XIV (with no evidence of another isomer). When, however, the reactants were heated in a sealed tube at 120-30°, 60% of the products was an isomer (XV) of XIV, m. 245° (from MeCN). AcCl or Ac2O and XIV yielded the anhydride, C14H12O3, m. 183° (from PhMe), readily reconverted into XIV. Catalytic hydrogenation of XIV gave 4-cis-phenylhexahydro-cis,cis-phthalic acid C14H16O4 (XVI), m. 213° (from 50% AcOH); anhydride, m. 156° (from PhMe); di-Me ester, m. 50-1° (from MeOH). XVI (2 g.) heated 6 hrs. at 180° with excess fuming HCl gave a mixture of 2 trans isomers, the complete structures of which are still in doubt, but both of which are 4-phenylhexahydroisophthalic acids, 1.5 g. of the isomer (XVII) m. 210° and 0.5 g. of the isomer (XVIII) m. 183°. Hydrogenation of XV with PtO2 in AcOH yielded XVIII, which on dehydrogenation with SeO2 in AcOH gave 3,4-(HO2C)2C6H3Ph (XIX), m. 245° (from AcOEt and C6H6). Attempts to cause anhydride formation by heating XIX with AcCl gave a noncryst. glassy material reconverted by long heating with H2O into XIX. Dehydrogenation of XV gave XIX. SOCl2 (5 cc.) and 0.3 g. AlCl3 refluxed 2 hrs. with 0.5 g. XIX in 20 cc. CS2, followed by rapid stirring with ice-H2O-HCl and by Et2O extraction, formed 2-carboxy-9-fluorenone, subliming above 270°, identified as the Me ester, silky needles, m. 181° (from MeOH) [cf. Fortner, Monatsh. 25, 451(1904)].

L14 ANSWER 47 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI General synthesis of α-unsaturated acids from malonic acid
AN 1925:19147 CAPLUS
DN 19:19147
OREF 19:2475d-f
TI General synthesis of α-unsaturated acids from malonic acid
AU Dutt, I. Sikhibhushan
SO Quart. J. Chem. Soc. (1925), 1, 297-301
DT Journal
LA Unavailable
AB CH2(CO2H)2 easily condenses with aldehydes in the presence of C5H11N in C5H5N solution to alkylidene- and arylidenemalonic acids, which, under the influence of C5H5N, particularly on heating, lose CO2, giving α-unsatd. CO2H acids in excellent yields. AcH gives 75% of crotonic acid; 10 g. glyoxylic acid gives 1.8 g. fumaric and 2.8 g. maleic acids; BzH gives 90% of cinnamic acid; p-MeC6H4CHO gives 87% p-methylcinnamic acid; furfural gives 70% furfuracrylic acid; o-O2NC6H4CHO gives 73% o-nitrocinnamic acid; the p- and m-derivs. result in 82% and 90%, resp.; piperonal gives 76% piperonylacrylic acid; p-MeOC6H4CHO gives 80% p-methoxycinnamic acid; p-Me2NC6H4CHO gives 65% p-dimethylaminocinnamic acid; m-BrC6H4CHO gives 83% of m-bromocinnamic acid; o-HOC6H4CHO gives 20% o-coumaric acid; carbethoxyvanillin gives 12% of ferulic acid; dicarbethoxyprotocatechualdehyde gives 7% caffeic acid; PhCH:CHCHO (heating the reaction mixture 2 hrs.) gives 70% of cinnamylidenemalonic acid; on longer heating 60% of the cinnamylideneacetic acid. Me2CO gives 60% of β,β-dimethylacrylic acid; Et2CO gives 35% of β,β-diethylacrylic acid; cyclohexanone gives not over 5% of cyclohexylideneacetic acid.

L14 ANSWER 48 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Polymerization of allyl cinnamalacetate
AN 1923:15035 CAPLUS
DN 17:15035
OREF 17:2419e-g
TI Polymerization of allyl cinnamalacetate
AU Blicke, F. F.
SO Journal of the American Chemical Society (1923), 45, 1562-6
CODEN: JACSAT; ISSN: 0002-7863
DT Journal
LA Unavailable
AB Allyl cinnamalacetate (I), obtained in 45-50% yield from allyl alc., PhCH:CHCH:CHCO2H (II) and H2SO4 at 90-5°, is light yellow, highly refractive, b20 210°, is readily saponified by alc. KOH, instantly decolorizes Br in CS2 and KMnO4 in H2O; hexabromide, m. 126°, seps. from alc. in solvated crystals, m. 111-2°. Heated in small evacuated bulbs for 7 days at 210°, I gradually becomes more and more viscous and finally changes into a light yellow, almost solid mass which, dissolved in Me2CO and poured into much cold alc., gives 25% of an amorphous, amber-like polymer of I; this in boiling Me2CO with 5 equivs. ale, KOH (calculated on the basis of the monomol. I) gives a slightly yellow amorphous polymer of II; heated with anhydrous Ba(OH)2 this acid gives a mixture of liquid compds., undoubtedly hydrocarbons, which decolorizes Br and KMnO4 and therefore contains at least 1 unsatd. constituent. Com. grades of allyl alc. and chloride undergo spontaneous polymerization on long standing.

L14 ANSWER 49 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI The distillation products of α-truxilic acid. Obtainment of a fourth truxillic acid
AN 1923:15034 CAPLUS
DN 17:15034
OREF 17:2419c-e

TI The distillation products of α-truxilic acid. Obtainment of a fourth truxillic acid
AU Stobbe, Hans; Zschoch, Fritz
SO Berichte der Deutschen Chemischen Gesellschaft [Abteilung] B: Abhandlungen (1923), 56B, 676-8
CODEN: BDCBAD; ISSN: 0365-9488
DT Journal
LA Unavailable
AB Distillation of four 30-g. portions of α-truxillic acid gave at 90-190° 1.6 g. of a colorless aqueous liquid, at 190-290° 26.6 g. of (chiefly) trans-cinnamic acid, at 290-320° 50.7 g. of a mixture of stilbene, a compound m. 192-4°, γ-truxillic anhydride (m. 189-90°) and a new η-truxillic anhydride (I), above 320°, with much decomposition, 3.4 g. of a yellow-red liquid containing H2O and tarry products, and 18.1 g. residue. 1, m. 287°, depresses the m. p. of truxone (m. 294°) 30°, does not give the blue KOH melt typical of truxone, mol. weight in boiling C6H6 271-8, does not decolorize KMnO4 in Na2CO3, at 0°, is only slightly Soluble in NaOH, gives with piperidine what is probably η-truxillpiperididic acid, m. 240°, neutral to litmus. Digested a long time with Ba(OH)2 I gives η-truxillic acid, m. 260° (278-80° if previously heated a long time at 150-60° markedly depresses the m. p. of the α-acid. Liebermann's "distyryl" (Ber. 22, 124(1889)) is the above mixture of 4 compds. contained in the 290-320° fraction. Distillation of 50 g. trans-cinnamic acid gave: (1) Up to 280°, chief fraction, containing 30 g. cinnamic acid and 3 g. of a neutral portion separated by further fractionation into styrene and stilbene; (2) from 280° to 310°, 1 g. of a resinous mass; (3) 8 g. of carbonized residue.

=> d l14 28-38 ti

L14 ANSWER 28 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Ethylenes

L14 ANSWER 29 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Synthesis and properties of α,β-unsaturated valerolactams

L14 ANSWER 30 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Use of the Wittig reaction for synthesis of α,β-unsaturated and polyene acids

L14 ANSWER 31 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Synthesis of β-hydroxy esters from ethyl acetate and ketones or aldehydes by means of lithium amide. Some results with other esters

L14 ANSWER 32 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Several dichlorobutadienyl alcohols and their transformation into dienic acids

L14 ANSWER 33 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Phosphorus organic compounds. XX. Phosphine oxides as reagents for olefin formation

L14 ANSWER 34 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Rearrangement of 1,1-dichloro-5-hydroxy(chloro)-5-aryl-1,3-pentadienes into δ-arylpentadienoic acids

L14 ANSWER 35 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI The hydrolysis of γ-cyano-γ-phenylpimelodinitrile

L14 ANSWER 36 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI The reaction of acetals with malonic acid and its derivatives. A

contribution to the knowledge of the Knoevenagel-Doebner reaction

L14 ANSWER 37 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Some new derivatives of khellin and its product of demethylation

L14 ANSWER 38 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI An attempted synthesis of 1,10-cyclopentenoheptalene. 1,8-Tetramethyleneazulene

=> d l14 30 ti fbib abs

L14 ANSWER 30 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Use of the Wittig reaction for synthesis of α,β-unsaturated and polyene acids
AN 1961:7620 CAPLUS
DN 55:7620
OREF 55:1420b-d
TI Use of the Wittig reaction for synthesis of α,β-unsaturated and polyene acids
AU Kucherov, V. F.; Kovalev, B. G.; Nazarova, I. I.; Yanovskaya, L. A.
CS N. D. Zelinskii Inst. Org. Chem., Moscow
SO Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya (1960) 1512-14
CODEN: IASKA6; ISSN: 0002-3353
DT Journal
LA Unavailable
AB cf. W. and Haag, CA 50, 10030g. Refluxing 16.06 g. Ph3P:CHCO2Et with 2.64 g. cinnamaldehyde in C6H6 6 hrs. under N gave after treatment with petr. ether 2.85 g. Et 4-phenyl-1,3-butadienecarboxylate, 70.5%, b1 149-51°, n20D 1.5201; free acid m. 166-7°. Similarly were prepared: 48.5% EtCH:CHCO2Et, b17 54.5-5°, n21D 1.4310; 50% EtOCH2CH2CH:CHCO2Et, b7 73-6°, n19D 1.4427; 100% PhCH:CHCO2Et, b10 138-40°, n20D 1.5591; 50.6% (2-C4H3O)CH:CHCO2Et, b6 100°, n17D 1.5438; 67.5% Me2C:CH(CH2)2CMe:CHCH:CHCO2Et, b14 152-5°, n20D 1.5292; 34.1% CH2:CHCH:CHCO2Et, b19 60-1°, n21D 1.4819 (free acid m. 72°); 80.3% Me(CH:CH)2CO2Et, b8 71-2°, n21D 1.4940; 87% Me(CH:CH)3CO2Et, b0.3 61-3°, m. 39-40° (free acid m. 187-91°); 82% Me(CH:CH)4CO2Et, m. 90-3.5°; 88% Me(CH:CH)5CO2Et, m. 135-6°. Reaction with MeCHBrCHO gave 64.7% MeCHBrCH:CHCO2Et, b4 74-5°, n20D 1.4876. 2,4,6,8-Dodecatetraenecarboxylic acid, m. 226-7°, was prepared by saponification of the Et ester with aqueous MeOH solution of NaOH.

=> logoff hold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	85.34	228.89

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-8.58	-14.82

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PASSWORD:
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FILE 'CAPLUS' ENTERED AT 07:09:44 ON 11 DEC 2007
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COST IN U.S. DOLLARS                                  SINCE FILE      TOTAL
                                                         ENTRY    SESSION
FULL ESTIMATED COST                                      85.34     228.89

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)            SINCE FILE      TOTAL
                                                         ENTRY    SESSION
CA SUBSCRIBER PRICE                                      -8.58     -14.82

=> d his

     (FILE 'HOME' ENTERED AT 06:07:53 ON 11 DEC 2007)

     FILE 'REGISTRY' ENTERED AT 06:08:12 ON 11 DEC 2007
L1             0 2,4-PENTADIENEOIC ACID/CN
                 E 2,4-PENTADIENEOIC ACID/CN
                 E 2,4-PENTADIENOIC ACID/CN
                 E 2,4-PENTADIENOIC ACID, 5-METHYL/CN
L2               STRUCTURE UPLOADED
L3             0 SEARCH L2 EXACT SAM
L4             3 SEARCH L2 EXACT FULL

     FILE 'CAPLUS' ENTERED AT 06:16:55 ON 11 DEC 2007
L5             9 L4

     FILE 'REGISTRY' ENTERED AT 06:27:46 ON 11 DEC 2007

     FILE 'CAPLUS' ENTERED AT 06:28:11 ON 11 DEC 2007

     FILE 'REGISTRY' ENTERED AT 06:29:04 ON 11 DEC 2007
                 E 2,4-PENTADIENOIC ACID/CN
L6             1 E3

     FILE 'CAPLUS' ENTERED AT 06:29:37 ON 11 DEC 2007
L7             2 L6/THU

     FILE 'REGISTRY' ENTERED AT 06:32:17 ON 11 DEC 2007

     FILE 'CAPLUS' ENTERED AT 06:32:27 ON 11 DEC 2007
L8            33 L6/PREP

     FILE 'REGISTRY' ENTERED AT 06:38:10 ON 11 DEC 2007
                 E 5-PHENYL- 2,4-PENTADIENOIC ACID/CN
                 E 2,4-PENTADIENOIC ACID, 5-PHENYL/CN
L9             2 E4

     FILE 'CAPLUS' ENTERED AT 06:39:43 ON 11 DEC 2007
L10          158 L9
L11            0 9/THU
L12           10 L9/THU
L13           52 L9/PREP
L14           49 L13 NOT L12

=> d l14 17-27 ti

L14  ANSWER 17 OF 49  CAPLUS  COPYRIGHT 2007 ACS on STN
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TI Cinnamylideneacetic acid and its derivatives

L14 ANSWER 18 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI β-Amyrin juarezate, a novel ester from Marsdenia pringlei and triterpenes from Asclepias linaria

L14 ANSWER 19 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Condensation of ethyl crotonate, 3-methylcrotonate, and isopropylidenemalonate with aromatic aldehydes

L14 ANSWER 20 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Synthesis and NMR and IR spectra of α-trans-γ-cis-β-styrylacrylic acid

L14 ANSWER 21 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Condensation of 2-alkyl-substituted salts of 1,3-dioxolanium with aldehyde acetals. Synthesis of unsaturated aromatic and heterocyclic acids

L14 ANSWER 22 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Polyhalogenated α,α'-diethylenic ketones. Synthesis and properties of polychlorinated 3-pentadienones and 3-heptatrienones

L14 ANSWER 23 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Synthesis of cinnamylideneacetic acid by the Perkin reaction

L14 ANSWER 24 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Use of sulfuric acid as a condensing reagent

L14 ANSWER 25 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Ethyl esters of α,β-unsaturated esters by the PO olefination method

L14 ANSWER 26 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Reactions with phosphinealkylenes. VIII. Novel synthesis of carboxylic acids from phosphine alkylenes

L14 ANSWER 27 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Isomerization of terphenyls

=> d l14 17-20 ti fbib abs

L14 ANSWER 17 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Cinnamylideneacetic acid and its derivatives
AN 1975:155832 CAPLUS
DN 82:155832
OREF 82:24856h,24857a
TI Cinnamylideneacetic acid and its derivatives
IN Tsuda, Minoru; Tanaka, Hideaki
PA Agency of Industrial Sciences and Technology, Japan
SO Jpn. Tokkyo Koho, 3 pp.
CODEN: JAXXAD
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 49047735	B	19741217	JP 1969-20056	19690318
				JP 1969-20056	19690318

AB Reaction of 0.5 mole PhCH:CHCHO with 1.5 mole Ac2O over 0.5 mole AcOK at 40° gave 52% PhCH:CHCH:CHCO2H. The large excess of Ac2O inhibited polymerization of the aldehyde and product.

L14 ANSWER 18 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI β-Amyrin juarezate, a novel ester from Marsdenia pringlei and triterpenes from Asclepias linaria
AN 1975:54218 CAPLUS
DN 82:54218
OREF 82:8659a,8662a
TI β-Amyrin juarezate, a novel ester from Marsdenia pringlei and triterpenes from Asclepias linaria
AU Dominguez, Xorge A.; Marroquin, Jorge; Olguin, Luz M.; Morales, Francisco; Valdez, Victoria
CS Dep. Quim., Inst. Tecnol. Estud. Super. Monterrey, Monterrey, Mex.
SO Phytochemistry (Elsevier) (1974), 13(11), 2617-18
CODEN: PYTCAS; ISSN: 0031-9422
DT Journal
LA English
AB Exts. of M. pringlei, obtained by successive plant treatment with light petrol and EtOH were chromatographed over silica gel, and the chromatograms were eluted with solvents of increasing polarity, starting with C6H6 and proceeding to MeOH, the petrol extract yielding β-amyrin juarezate and the EtOH extract giving kondurite. On hyrogenation, β-amyrin 4-phenylvalerate was obtained. The petrol extract of A. linaria was sep. into individual constituents by a combination of column and preparative thin-layer chromatog. yielding triacontane, ψ-taraxasteryl acetate, sitosterol, and oleanolic acid.

L14 ANSWER 19 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Condensation of ethyl crotonate, 3-methylcrotonate, and isopropylidenemalonate with aromatic aldehydes
AN 1973:546113 CAPLUS
DN 79:146113
OREF 79:23681a,23684a
TI Condensation of ethyl crotonate, 3-methylcrotonate, and isopropylidenemalonate with aromatic aldehydes
AU Angelova, Iordanka; Ivanov, Chavdar
CS Chem. Fac., Univ. Kl. Ohridsky, Sofia, Bulg.
SO Chemische Berichte (1973), 106(8), 2643-7
CODEN: CHBEAM; ISSN: 0009-2940
DT Journal
LA German
GI For diagram(s), see printed CA Issue.
AB RC6H4CHO (R = H, 4-Me, 4-MeO, 2- or 4-Cl) reacted with H2NNa and MeCR1:CHCO2Et (R1 = H, Me) or Me2C:C(CO2Et)2 in DMF to give RC6H4CH:CHCR1:CHCO2H or the lactones (I), resp. I were formed via (RC6H4CH:CH)2C:C(CO2H)2.

L14 ANSWER 20 OF 49 CAPLUS COPYRIGHT 2007 ACS on STN
TI Synthesis and NMR and IR spectra of α-trans-γ-cis-β-styrylacrylic acid
AN 1973:418302 CAPLUS
DN 79:18302
OREF 79:2939a,2942a
TI Synthesis and NMR and IR spectra of α-trans-γ-cis-β-styrylacrylic acid
AU Stepanova, O. S.; Galatina, A. I.; Nguyen Van Tong
CS Odess. Univ., Odessa, USSR
SO Voprosy Stereokhimii (1972), No. 2, 109-13
CODEN: VSTKB9; ISSN: 0372-6762
DT Journal
LA Russian
AB PhC.tplbond.CCHO reacted with BrCH2CO2Me in the presence of Zn-C6H6 to give PhC.tplbond.CCH(OH)CH2CO2Me, which was dehydrated with POCl3 to trans-PhC.tplbond.CCH:CHCO2Me (I). Selective hydrogenation of I, followed by hydrolysis, gave α-trans-γ-cis-PhCH:CHCH:CHCO2H (II). The

ir and NMR spectra of II were studied.

```
=> \logoff hold
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         44626 HOLD
         31441 HOLDS
         74887 HOLD
                 (HOLD OR HOLDS)
L15          0 \LOGOFF HOLD
                 (LOGOFF(W)HOLD)

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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                    106.77     250.32

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
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FILE 'CAPLUS' ENTERED AT 07:35:03 ON 11 DEC 2007
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FULL ESTIMATED COST                                    106.77     250.32

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
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CA SUBSCRIBER PRICE                                    -11.70     -17.94

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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
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FULL ESTIMATED COST                                    106.77     250.32

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CA SUBSCRIBER PRICE                                    -11.70     -17.94

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DICTIONARY FILE UPDATES: 10 DEC 2007 HIGHEST RN 957336-90-2

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http://www.cas.org/support/stngen/stndoc/properties.html

```
=> e 2,4,6-heptatrienoic acid, 5-phenyl/cn
E1            1     2,4,6-HEPTATRIENOIC ACID, 5-METHYL-7-PHENYL-/CN
E2            1     2,4,6-HEPTATRIENOIC ACID, 5-METHYL-7-PHENYL-, ETHYL ESTER/CN
E3            0 --> 2,4,6-HEPTATRIENOIC ACID, 5-PHENYL/CN
E4            1     2,4,6-HEPTATRIENOIC ACID, 6,7,7-TRICHLORO-, (E,E)-/CN
E5            1     2,4,6-HEPTATRIENOIC ACID, 6,7,7-TRICHLORO-3-HYDROXY-, ETHYL
                    ESTER/CN
E6            1     2,4,6-HEPTATRIENOIC ACID, 6-(((DIMETHYLAMINO)CARBONYL)THIO)-
                    , METHYL ESTER, (2Z,4Z)-/CN
E7            1     2,4,6-HEPTATRIENOIC ACID, 6-(((DIMETHYLAMINO)CARBONYL)THIO)-
                    7-PHENYL-, METHYL ESTER, (2Z,4E)-/CN
E8            1     2,4,6-HEPTATRIENOIC ACID, 6-(((DIMETHYLAMINO)CARBONYL)THIO)-
                    7-PHENYL-, METHYL ESTER, (2Z,4Z)-/CN
E9            1     2,4,6-HEPTATRIENOIC ACID, 6-(6-(1,1-DIMETHYLETHYL)-2,3-DIHYD
                    RO-1,1-DIMETHYL-1H-INDEN-4-YL)-, (2E,4E)-/CN
E10           1     2,4,6-HEPTATRIENOIC ACID, 6-(6-(1,1-DIMETHYLETHYL)-2,3-DIHYD
                    RO-1,1-DIMETHYL-1H-INDEN-4-YL)-, METHYL ESTER, (2E,4E)-/CN
E11           1     2,4,6-HEPTATRIENOIC ACID, 6-(6-(1,1-DIMETHYLETHYL)-2,3-DIHYD
                    RO-1,1-DIMETHYL-1H-INDEN-4-YL)-3-METHYL-, (2E,4E)-/CN
E12           1     2,4,6-HEPTATRIENOIC ACID, 6-(6-(1,1-DIMETHYLETHYL)-2,3-DIHYD
                    RO-1,1-DIMETHYL-1H-INDEN-4-YL)-3-METHYL-, METHYL ESTER, (2E,
                    4E)-/CN

=> e e1
E1            1     2,4,6-HEPTATRIENOIC ACID, 5-METHYL-7-(6,7,7-TRIMETHYL-2,3-DI
                    OXABICYCLO(2.2.2)OCT-5-EN-1-YL)-, METHYL ESTER, (E,E,E)-/CN
E2            1     2,4,6-HEPTATRIENOIC ACID, 5-METHYL-7-(6,7,7-TRIMETHYL-2,3-DI
                    OXABICYCLO(2.2.2)OCT-5-EN-1-YL)-, METHYL ESTER, (E,E,Z)-/CN
E3            1 --> 2,4,6-HEPTATRIENOIC ACID, 5-METHYL-7-PHENYL-/CN
E4            1     2,4,6-HEPTATRIENOIC ACID, 5-METHYL-7-PHENYL-, ETHYL ESTER/CN
E5            1     2,4,6-HEPTATRIENOIC ACID, 6,7,7-TRICHLORO-, (E,E)-/CN
E6            1     2,4,6-HEPTATRIENOIC ACID, 6,7,7-TRICHLORO-3-HYDROXY-, ETHYL
                    ESTER/CN
E7            1     2,4,6-HEPTATRIENOIC ACID, 6-(((DIMETHYLAMINO)CARBONYL)THIO)-
                    , METHYL ESTER, (2Z,4Z)-/CN
E8            1     2,4,6-HEPTATRIENOIC ACID, 6-(((DIMETHYLAMINO)CARBONYL)THIO)-
                    7-PHENYL-, METHYL ESTER, (2Z,4E)-/CN
E9            1     2,4,6-HEPTATRIENOIC ACID, 6-(((DIMETHYLAMINO)CARBONYL)THIO)-
                    7-PHENYL-, METHYL ESTER, (2Z,4Z)-/CN
E10           1     2,4,6-HEPTATRIENOIC ACID, 6-(6-(1,1-DIMETHYLETHYL)-2,3-DIHYD
                    RO-1,1-DIMETHYL-1H-INDEN-4-YL)-, (2E,4E)-/CN
E11           1     2,4,6-HEPTATRIENOIC ACID, 6-(6-(1,1-DIMETHYLETHYL)-2,3-DIHYD
                    RO-1,1-DIMETHYL-1H-INDEN-4-YL)-, METHYL ESTER, (2E,4E)-/CN
E12           1     2,4,6-HEPTATRIENOIC ACID, 6-(6-(1,1-DIMETHYLETHYL)-2,3-DIHYD
                    RO-1,1-DIMETHYL-1H-INDEN-4-YL)-3-METHYL-, (2E,4E)-/CN
```

```
=> e 2,4,6-heptatrienoic acid, 5-phenyl-/cn
E1            1     2,4,6-HEPTATRIENOIC ACID, 5-METHYL-7-PHENYL-/CN
E2            1     2,4,6-HEPTATRIENOIC ACID, 5-METHYL-7-PHENYL-, ETHYL ESTER/CN
E3            0 --> 2,4,6-HEPTATRIENOIC ACID, 5-PHENYL-/CN
E4            1     2,4,6-HEPTATRIENOIC ACID, 6,7,7-TRICHLORO-, (E,E)-/CN
E5            1     2,4,6-HEPTATRIENOIC ACID, 6,7,7-TRICHLORO-3-HYDROXY-, ETHYL
                    ESTER/CN
E6            1     2,4,6-HEPTATRIENOIC ACID, 6-(((DIMETHYLAMINO)CARBONYL)THIO)-
                    , METHYL ESTER, (2Z,4Z)-/CN
E7            1     2,4,6-HEPTATRIENOIC ACID, 6-(((DIMETHYLAMINO)CARBONYL)THIO)-
                    7-PHENYL-, METHYL ESTER, (2Z,4E)-/CN
E8            1     2,4,6-HEPTATRIENOIC ACID, 6-(((DIMETHYLAMINO)CARBONYL)THIO)-
                    7-PHENYL-, METHYL ESTER, (2Z,4Z)-/CN
E9            1     2,4,6-HEPTATRIENOIC ACID, 6-(6-(1,1-DIMETHYLETHYL)-2,3-DIHYD
                    RO-1,1-DIMETHYL-1H-INDEN-4-YL)-, (2E,4E)-/CN
E10           1     2,4,6-HEPTATRIENOIC ACID, 6-(6-(1,1-DIMETHYLETHYL)-2,3-DIHYD
                    RO-1,1-DIMETHYL-1H-INDEN-4-YL)-, METHYL ESTER, (2E,4E)-/CN
E11           1     2,4,6-HEPTATRIENOIC ACID, 6-(6-(1,1-DIMETHYLETHYL)-2,3-DIHYD
                    RO-1,1-DIMETHYL-1H-INDEN-4-YL)-3-METHYL-, (2E,4E)-/CN
E12           1     2,4,6-HEPTATRIENOIC ACID, 6-(6-(1,1-DIMETHYLETHYL)-2,3-DIHYD
                    RO-1,1-DIMETHYL-1H-INDEN-4-YL)-3-METHYL-, METHYL ESTER, (2E,
                    4E)-/CN

=> e e12
E1            1     2,4,6-HEPTATRIENOIC ACID, 6-(6-(1,1-DIMETHYLETHYL)-2,3-DIHYD
                    RO-1,1-DIMETHYL-1H-INDEN-4-YL)-, METHYL ESTER, (2E,4E)-/CN
E2            1     2,4,6-HEPTATRIENOIC ACID, 6-(6-(1,1-DIMETHYLETHYL)-2,3-DIHYD
                    RO-1,1-DIMETHYL-1H-INDEN-4-YL)-3-METHYL-, (2E,4E)-/CN
E3            1 --> 2,4,6-HEPTATRIENOIC ACID, 6-(6-(1,1-DIMETHYLETHYL)-2,3-DIHYD
                    RO-1,1-DIMETHYL-1H-INDEN-4-YL)-3-METHYL-, METHYL ESTER, (2E,
                    4E)-/CN
E4            1     2,4,6-HEPTATRIENOIC ACID, 6-(ACETYLOXY)-7-PHENYL-, METHYL ES
                    TER, (2Z,4E)-/CN
E5            1     2,4,6-HEPTATRIENOIC ACID, 6-(ACETYLOXY)-7-PHENYL-, METHYL ES
                    TER, (2Z,4Z)-/CN
E6            1     2,4,6-HEPTATRIENOIC ACID, 6-(DIMETHOXYPHOSPHINYL)-, METHYL E
                    STER, IRON COMPLEX, (E,E)-/CN
E7            1     2,4,6-HEPTATRIENOIC ACID, 6-(HYDROXYMETHYL)-, METHYL ESTER,
                    IRON COMPLEX, (E,E)-/CN
E8            1     2,4,6-HEPTATRIENOIC ACID, 6-FLUORO-3-METHYL-7-(1,2,3,4-TETRA
                    HYDRO-6-QUINOLINYL)-, (2E,4E,6E)-/CN
E9            1     2,4,6-HEPTATRIENOIC ACID, 6-FORMYL-7-((2-(1H-INDOL-3-YL)ETHY
                    L)AMINO)-2-(METHYLTHIO)-, ETHYL ESTER/CN
E10           1     2,4,6-HEPTATRIENOIC ACID, 6-METHYL-, METHYL ESTER/CN
E11           1     2,4,6-HEPTATRIENOIC ACID, 6-METHYL-3-(TRIFLUOROMETHYL)-, ETH
                    YL ESTER, (2E,4E)-/CN
E12           1     2,4,6-HEPTATRIENOIC ACID, 6-METHYL-7-(1H-PYRROL-2-YL)-, ETHY
                    L ESTER/CN

=> e e12
E1            1     2,4,6-HEPTATRIENOIC ACID, 6-METHYL-, METHYL ESTER/CN
E2            1     2,4,6-HEPTATRIENOIC ACID, 6-METHYL-3-(TRIFLUOROMETHYL)-, ETH
                    YL ESTER, (2E,4E)-/CN
E3            1 --> 2,4,6-HEPTATRIENOIC ACID, 6-METHYL-7-(1H-PYRROL-2-YL)-, ETHY
                    L ESTER/CN
E4            1     2,4,6-HEPTATRIENOIC ACID, 6-METHYL-7-(1H-PYRROL-2-YL)-, METH
                    YL ESTER/CN
E5            1     2,4,6-HEPTATRIENOIC ACID, 6-METHYL-7-(1H-PYRROL-2-YL)-, METH
                    YL ESTER, (E,E,E)-/CN
E6            1     2,4,6-HEPTATRIENOIC ACID, 6-METHYL-7-(4-NITROPHENYL)-, ETHYL
                     ESTER, (2E,4E,6E)-/CN
E7            1     2,4,6-HEPTATRIENOIC ACID, 6-METHYL-7-(5-NITRO-2-FURANYL)-, (
```

```
                    E,E,E)-/CN
E8          1       2,4,6-HEPTATRIENOIC ACID, 6-METHYL-7-(5-NITRO-2-FURANYL)-, M
                    ETHYL ESTER, (E,E,E)-/CN
E9          1       2,4,6-HEPTATRIENOIC ACID, 6-METHYL-7-(TETRAHYDRO-3,4-DIHYDRO
                    XY-2,4,5-TRIMETHYL-2-FURANYL)-, ETHYL ESTER, (2A(2E,4E
                    ,6E),3B,4A,5A)-/CN
E10         1       2,4,6-HEPTATRIENOIC ACID, 6-METHYL-7-(TETRAHYDRO-3,4-DIHYDRO
                    XY-2,4,5-TRIMETHYL-2-FURANYL)-, ETHYL ESTER, (2A(2E,4E
                    ,6E),3B,4A,5A)-(±)-/CN
E11         1       2,4,6-HEPTATRIENOIC ACID, 6-METHYL-7-(TETRAHYDRO-3-HYDROXY-4
                    -((2-METHOXYETHOXY)METHOXY)-2,4,5-TRIMETHYL-2-FURANYL)-, ETH
                    YL ESTER, (2A(2E,4E,6E),3B,4A,5A)-/CN
E12         1       2,4,6-HEPTATRIENOIC ACID, 6-METHYL-7-(TETRAHYDRO-3-HYDROXY-4
                    -((2-METHOXYETHOXY)METHOXY)-2,4,5-TRIMETHYL-2-FURANYL)-, ETH
                    YL ESTER, (2A(2E,4E,6E),3B,4A,5A)-(.+
                    -.)-/CN

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COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     2.70     253.02

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
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FULL ESTIMATED COST                                     2.70     253.02

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
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CA SUBSCRIBER PRICE                                     0.00     -17.94

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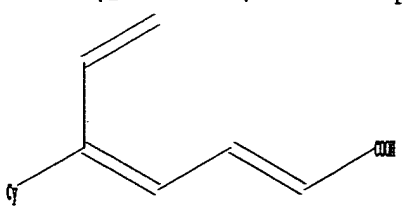

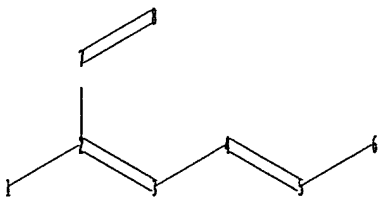

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1  2  3  4  5  6  7  8
chain bonds :
1-2  2-3  2-7  3-4  4-5  5-6  7-8
exact/norm bonds :
1-2
exact bonds :
2-3  2-7  3-4  4-5  5-6  7-8


Match level :
1:Atom  2:CLASS  3:CLASS  4:CLASS  5:CLASS  6:CLASS  7:CLASS  8:CLASS



L16     STRUCTURE UPLOADED

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L16 HAS NO ANSWERS
L16             STR
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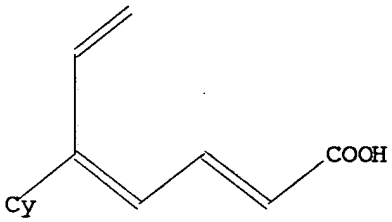


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Structure attributes must be viewed using STN Express query preparation.


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SAMPLE SCREEN SEARCH COMPLETED -      484 TO ITERATE

100.0% PROCESSED      484 ITERATIONS                                0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS:  ONLINE  **COMPLETE**
                        BATCH   **COMPLETE**
PROJECTED ITERATIONS:         8361 TO    10999
PROJECTED ANSWERS:               0 TO        0

L17           0 SEA SSS SAM L16

=> search l16 sss full
FULL SEARCH INITIATED 07:47:20 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED -     9406 TO ITERATE

100.0% PROCESSED     9406 ITERATIONS                                3 ANSWERS
SEARCH TIME: 00.00.01

L18           3 SEA SSS FUL L16

=> d mscan
'MSCAN' IS NOT A VALID FORMAT FOR FILE 'REGISTRY'

The following are valid formats:
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REG - RN
SAM - Index Name, MF, and structure - no RN
FIDE - All substance data, except sequence data
IDE - FIDE, but only 50 names
SQIDE - IDE, plus sequence data
SQIDE3 - Same as SQIDE, but 3-letter amino acid codes are used
SQD - Protein sequence data, includes RN
SQD3 - Same as SQD, but 3-letter amino acid codes are used
SQN - Protein sequence name information, includes RN

CALC - Table of calculated properties
EPROP - Table of experimental properties
PROP - EPROP and CALC

Any CA File format may be combined with any substance format to obtain CA references citing the substance. The substance formats must be cited first. The CA File predefined formats are:

ABS -- Abstract
APPS -- Application and Priority Information
BIB -- CA Accession Number, plus Bibliographic Data
CAN -- CA Accession Number
CBIB -- CA Accession Number, plus Bibliographic Data (compressed)
IND -- Index Data
IPC -- International Patent Classification
PATS -- PI, SO
STD -- BIB, IPC, and NCL

IABS -- ABS, indented, with text labels
IBIB -- BIB, indented, with text labels
ISTD -- STD format, indented

OBIB -------- AN, plus Bibliographic Data (original)
OIBIB ------- OBIB, indented with text labels

SBIB -------- BIB, no citations
SIBIB ------- IBIB, no citations

The ALL format gives FIDE BIB ABS IND RE, plus sequence data when it is available.
The MAX format is the same as ALL.
The IALL format is the same as ALL with BIB ABS and IND indented, with text labels.

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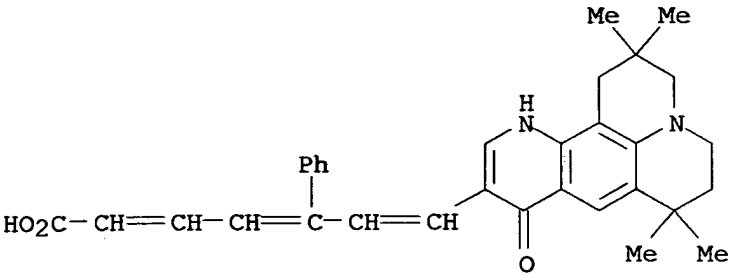
HELP FORMATS -- To see detailed descriptions of the predefined formats.
ENTER DISPLAY FORMAT (IDE):end

=> d scan

L18 3 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN 2,4,6-Heptatrienoic acid, 7-(2,3,6,7,9,12-hexahydro-2,2,7,7-tetramethyl-9-oxo-1H,5H-pyrido[3,2,1-gh][1,7]phenanthrolin-10-yl)-5-phenyl-
MF C32 H34 N2 O3



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HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):3

L18 3 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN INDEX NAME NOT YET ASSIGNED
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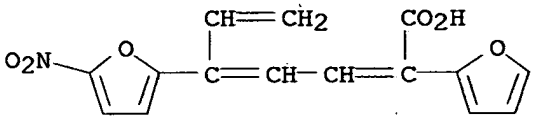
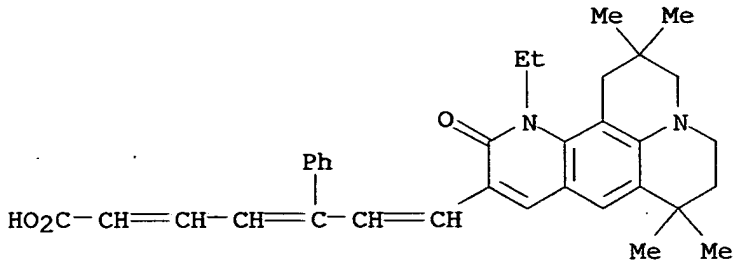


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L18 3 ANSWERS REGISTRY COPYRIGHT 2007 ACS on STN
IN 2,4,6-Heptatrienoic acid, 7-(12-ethyl-2,3,6,7,11,12-hexahydro-2,2,7,7-tetramethyl-11-oxo-1H,5H-pyrido[3,2,1-gh][1,7]phenanthrolin-10-yl)-5-phenyl-
MF C34 H38 N2 O3



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

ALL ANSWERS HAVE BEEN SCANNED

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COST IN U.S. DOLLARS SINCE FILE ENTRY TOTAL SESSION

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FULL ESTIMATED COST                                    176.60      426.92

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)        SINCE FILE       TOTAL
                                                       ENTRY     SESSION
CA SUBSCRIBER PRICE                                     0.00      -17.94

 SESSION WILL BE HELD FOR 120 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 07:49:33 ON 11 DEC 2007

Connecting via Winsock to STN



Welcome to STN International!  Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:
 * * * * * * RECONNECTED TO STN INTERNATIONAL * * * * * *
SESSION RESUMED IN FILE 'REGISTRY' AT 08:53:05 ON 11 DEC 2007
FILE 'REGISTRY' ENTERED AT 08:53:05 ON 11 DEC 2007
COPYRIGHT (C) 2007 American Chemical Society (ACS)

COST IN U.S. DOLLARS                              SINCE FILE       TOTAL
                                                       ENTRY     SESSION
FULL ESTIMATED COST                                   176.60      426.92

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)        SINCE FILE       TOTAL
                                                       ENTRY     SESSION
CA SUBSCRIBER PRICE                                     0.00      -17.94

=> e 2,4-pentadienoic acid, 5,5-diphenyl-/cn
E1            1     2,4-PENTADIENOIC ACID, 5,5-DIHYDROXY-3-ISOPROPYL-, LACTONE/C
                    N
E2            1     2,4-PENTADIENOIC ACID, 5,5-DIHYDROXY-3-METHYL-2-PROPIONYL-,
                    Δ-LACTONE/CN
E3            1 --> 2,4-PENTADIENOIC ACID, 5,5-DIPHENYL-/CN
E4            1     2,4-PENTADIENOIC ACID, 5,5-DIPHENYL-, (2E)-/CN
E5            1     2,4-PENTADIENOIC ACID, 5,5-DIPHENYL-, (E)-/CN
E6            1     2,4-PENTADIENOIC ACID, 5,5-DIPHENYL-, (Z)-/CN
E7            1     2,4-PENTADIENOIC ACID, 5,5-DIPHENYL-, 4-NITROPHENYL ESTER, (
                    E)-/CN
E8            1     2,4-PENTADIENOIC ACID, 5,5-DIPHENYL-, ETHYL ESTER/CN
E9            1     2,4-PENTADIENOIC ACID, 5,5-DIPHENYL-, ETHYL ESTER, (2E)-/CN
E10           1     2,4-PENTADIENOIC ACID, 5,5-DIPHENYL-, ETHYL ESTER, (2Z)-/CN
E11           1     2,4-PENTADIENOIC ACID, 5,5-DIPHENYL-, ETHYL ESTER, (E)-/CN
E12           1     2,4-PENTADIENOIC ACID, 5,5-DIPHENYL-, ETHYL ESTER, (Z)-/CN

=> e3
L19           1 "2,4-PENTADIENOIC ACID, 5,5-DIPHENYL-"/CN

=> d l19

L19  ANSWER 1 OF 1  REGISTRY  COPYRIGHT 2007 ACS on STN
RN   19625-92-4  REGISTRY
ED   Entered STN:  16 Nov 1984
CN   2,4-Pentadienoic acid, 5,5-diphenyl- (6CI, 8CI, 9CI)  (CA INDEX
     NAME)
MF   C17 H14 O2
LC   STN Files:   BEILSTEIN*, CA, CAOLD, CAPLUS, USPAT2, USPATFULL
         (*File contains numerically searchable property data)
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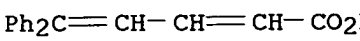

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	184.40	434.72

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-17.94

FILE 'REGISTRY' ENTERED AT 08:54:20 ON 11 DEC 2007

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 10 DEC 2007 HIGHEST RN 957336-90-2
DICTIONARY FILE UPDATES: 10 DEC 2007 HIGHEST RN 957336-90-2

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TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

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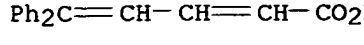
REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=> l19
L20 1 "2,4-PENTADIENOIC ACID, 5,5-DIPHENYL-"/CN

=> d l20

L20 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN
RN 19625-92-4 REGISTRY
ED Entered STN: 16 Nov 1984
CN 2,4-Pentadienoic acid, 5,5-diphenyl- (6CI, 8CI, 9CI) (CA INDEX NAME)
MF C17 H14 O2
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, USPAT2, USPATFULL
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	7.35	442.07

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-17.94

FILE 'CAPLUS' ENTERED AT 08:54:50 ON 11 DEC 2007

FILE COVERS 1907 - 11 Dec 2007 VOL 147 ISS 25
FILE LAST UPDATED: 10 Dec 2007 (20071210/ED)

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http://www.cas.org/infopolicy.html

=> l19
L21 3 L19

=> d l21 1-3 ti fbib abs

L21 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN
TI Preparation of benzofuran moiety-containing piperazine derivatives as inhibitors of STAT-6 phosphorylation
AN 2002:521719 CAPLUS
DN 137:93769
TI Preparation of benzofuran moiety-containing piperazine derivatives as inhibitors of STAT-6 phosphorylation
IN Kawakatsu, Nobuyuki; Namiki, Takayuki; Yamazaki, Norihisa; Yuasa, Masayuki; Miki, Toyohiko; Suenobu, Noriko; Shimanuki, Tomomasa
PA Pola Chemical Industries, Inc., Japan
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

PI	WO 2002053550	A1	20020711	WO 2001-JP11265	20011221
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	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
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				WO 2001-JP11265	W 20011221
	AU 2002216388	A1	20020716	AU 2002-216388	20011221
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	EP 1346987	A1	20030924	EP 2001-272833	20011221
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				JP 2000-398075	A 20001227
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	US 2004053940	A1	20040318	US 2003-450842	20030626
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OS MARPAT 137:93769

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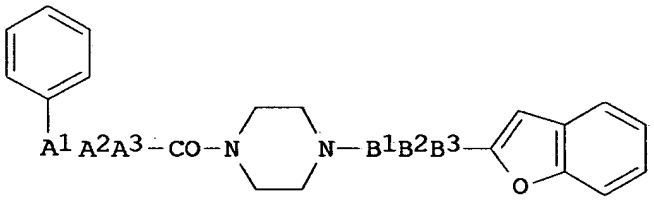

I

AB The title compds. I [A1 = (CHR1)a; A2 = (CH:CH)q; A3 = (CH2)m; B1 = (CH2)n; B2 = (CR2R3)b; B3 = (CH2)p; R1 is Ph or hydrogen; a is 0 or 1; m, n, b, p, and q are each independently an integer of 0 to 5; and R2 and R3 are each independently hydrogen or hydroxyl, or alternatively R2 and R3 together represent oxygen; a proviso is given] are prepared I inhibit the phosphorylation of STAT 6 and are useful in the treatment or prevention of allergy. The activity of compds. of this invention against JAK-STAT-6 phosphorylation was demonstrated. A formulation is given.

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L21 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN

TI 5,5-Diarylpenta-2,4-dienoic acid amides as potential antimalarial agents

AN 1968:426954 CAPLUS

DN 69:26954

OREF 69:5003a,5006a

TI 5,5-Diarylpenta-2,4-dienoic acid amides as potential antimalarial agents
AU Colwell, William T.; Lange, Judy H.; Henry, David W.
CS Stanford Res. Inst., Menlo Park, CA, USA
SO Journal of Medicinal Chemistry (1968), 11, 749-52
CODEN: JMCMAR; ISSN: 0022-2623
DT Journal
LA English
GI For diagram(s), see printed CA Issue.
AB A series of 5,5-diaryl-penta-2,4-dienoic acids and their amides were synthesized and evaluated as antimalarial agents. The acids were prepared from the corresponding diaryl ketones either directly by a Reformatskii procedure or through acetylenic alc. and acrolein intermediates. The preparation of a series of 3,3-bis(4-chlorophenyl)-acrylamides is also reported. One compound, N,N-diethyl-5,5-bis(4-chlorophenyl)penta-2,4-dienoic acid amide (I), provided significant antiplasmodial activity.

L21 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN
TI Reformatskii reaction in syntheses of ω,ω-diarylalkanoic acids and related compounds
AN 1959:44983 CAPLUS
DN 53:44983
OREF 53:8063b-i,8064a-i
TI Reformatskii reaction in syntheses of ω,ω-diarylalkanoic acids and related compounds
AU Klemm, L. H.; Bower, G. M.
CS Univ. of Oregon, Eugene
SO Journal of Organic Chemistry (1958), 23, 344-8
CODEN: JOCEAH; ISSN: 0022-3263
DT Journal
LA Unavailable
OS CASREACT 53:44983
AB Ph2CO and various MeO-substituted benzophenones were submitted to the Reformatskii reaction with BrCH2CO2Et (I) and BrCH2CH:CHCO2Me (II), and an attempt made to correlate the data obtained with others quoted in the literature. Following the general procedure of Gardner (C.A. 49, 12358c) 57 g. p-MeOC6H4CO2H and 41 g. MeOPh stirred 2 hrs. at 70° with 540 g. polyphosphoric acid, the mixture poured into ice H2O, the precipitate washed with 500 ml. 5% aqueous NaOH and with H2O, and the dried product crystallized (alc.) yielded 75-4, g. (p-MeOC6H4)2CO (III), m. 144-6°. Similarly 41 g. 3,4,5-(MeO)3C6H2CO2H, 25 g. 1,2-(MeO)2C6H4, and 430 g. polyphosphoric acid gave 36 g. 3,3' ,4,4' ,5-pentamethoxybenzophenone (IV). Zn (50 g., 20-mesh activated with HCl), 58.3 g. III, and a crystal of iodine in 400 ml. anhydrous C6H6 stirred under reflux with addition of 70 g. I in 20 ml. C6H6, the mixture refluxed 15 min. and diluted with 200 ml. 10% AcOH, the aqueous layer extracted with C6H6, the combined organic solns. washed (H2O, excess 1.5% NH4OH, H2O), dried (MgSO4), and evaporated gave 55 g. RR'C(OH)CH2CO2Et (V, R = R' = p-MeOC6H4) (VI), m. 92-3° (EtOAc). VI (14.4 g.) in 140 ml. warm dry C6H6 and 20 ml. anhydrous HCO2H refluxed 5 min., the C6H6 removed in a current of air, the residual unsatd. ester hydrogenated 30 min. in 90 ml. AcOH at 3.5-4.0 atmospheric with 2.5 g. 5% Pd-C, the filtered solution evaporated, and the residue crystallized yielded 83% RR'CHCH2CO2Et (VII, R = R' = p-MeOC6H4) (VIII), m. 49.5-50.5° (absolute alc.), hydrolyzed 1 hr. by refluxing with 3% KOH in 75% alc., the concentrated solution acidified with HCl, and the precipitate recrystd. (absolute alc.) to give 97% RR'CHCH2CO2H (IX, R = R' = p-MeOC6H4) (X), m. 138.5-9.5°. Similar hydrolysis of the residual unsatd. ester (from dehydration of 5 g. VI) yielded 4.1 g. (p-MeOC6H4)2C:CHCO2H, m. 146.5-7.5° (dilute MeOH). IV and 3-MeOC6H4Bz were similarly treated in refluxing C6H6 with I. The % yields for various methoxy-substituted benzophenones in the Reformatskii reaction with I were tabulated for comparison (position of substituents, % yield of V, and over-all % yield of IX given): none, 95, -; 2, 60-70, -;

3, 95-100, 88; 4, 78, 67; 4, 4', 69, 56; 3, 3', 4, 4', 81, -; 3, 4, 4', 5, 70, -; 3, 3', 4, 4', 5, -, 59. From these results it was anticipated that diaryl ketones would react readily with II but with lower yields due to an increasing number of possible side reactions. Zn (4.4 g., activated 20-mesh), 20 g. Ph_2CO, 55 ml. dry C_6H_6, 35 ml. anhydrous Et_2O, and a crystal of iodine treated in 1 hr. with 10 g. II in 25 ml. C_6H_6, the mixture stirred and refluxed 2 hrs. with 2 g. Zn, and treated with 45 ml. 2N AcOH, the organic layer washed (5% aqueous $NaHCO_3$ and H_2O), dried (Na_2SO_4) and evaporated, the residual oil warmed 15 min. with 2 vols. anhydrous HCO_2H, the mixture evaporated in a current of air, and the residue fractionally distilled gave 32% Ph_2C:$CHCH:CHCO_2Me$ (XI), m. 86-7° (MeOH), refluxed 2 hrs. with a slight excess of 2% KOH in MeOH and the solution acidified to give a quant. yield of Ph_2C: CHCH: $CHCO_2H$, m. 190-1° (PhMe). XI (15 g.) in 150 ml. AcOH hydrogenated 10 min. at 3.5-4.0 atmospheric with 3 g. 5% Pd-C and the filtered solution distilled gave 97% colorless $Ph_2CH(CH_2)_3CO_2Me$, b0.5 145-50°, hydrolyzed to yield quantitatively $Ph_2CH(CH_2)_3CO_2H$, m. 92.5-3.5° (60% alc.), converted by $SOCl_2$ to the corresponding $Ph_2CH(CH_2)_3COCl$ (XII). XII (from 10 g. acid and 8 ml. $SOCl_2$) in 250 ml. purified CS_2 added through the Leonard and Sentz attachment (C.A. 48,676d) in 10 hrs. with stirring and refluxing to 2.7 g. anhydrous $AlCl_3$ in 750 ml. CS_2 with addns. of 2.7 g. $AlCl_3$ at 3-hr. intervals, the mixture stirred 2 hrs. and diluted with H_2O, the organic layer from the filtered mixture distilled and the residue taken up in C_6H_6, the washed (excess 10% aqueous K_2CO_3 and H_2O), dried ($MgSO_4$) solution evaporated, and the residue distilled at 190-200°/0.5 mm. yielded 5.47 g. 9-phenyl-5-benzosuberone (XIII), m. 71.0-1.5° (dilute alc.); oxime, m. 152.5-3.5° (C_6H_6-petr. ether). XIII (2 g.) submitted to Huang-Minlon-Wolff-Kishner reduction, the diluted mixture extracted with C_6H_6, the H_2O-washed and dried ($MgSO_4$) extract distilled, and the liquid (1.2 g., b1.0 132-5°) redistd. gave 5-phenylbenzosuberan (XIV), b2 149-50°, m. 41-5°. PhMgBr (0.4 g. Mg, 2.4 g. PhBr, 75 ml. Et_2O) treated slowly at 0° (ice-bath) with 2 g. 5-benzosuberone (obtained by cyclization of $PhCH_2(CH_2)_3CO_2H$ with polyphosphoric acid) in 20 ml. Et_2O, the mixture stirred 30 min. at 0° and refluxed 1 hr., the mixture hydrolyzed and the carbinol dehydrated with HCO_2H according to Klemm and Ziffer (C.A. 50, 4094f), the product distilled at 1.5 mm. to give 0.4 g. colorless ketonic liquid (presumably starting material) and 1 g. $KMnO_4$-reducing liquid. b1.5 115-35°, the alkenic fraction (0.9 g.) in 25 ml. AcOH hydrogenated 2 hrs. at 4 atmospheric with 0.1 g. prereduced PtO_2, and the filtered solution distilled yielded 0.56 g. XIV, b2 149-50°, λ 3.26-3.52, 6.24, 6.71, 6.90, 13.35, 13.9, 14.35 μ. XIII (2.36 g.), 1.48 g. HCO_2Et, and a few ml. C_6H_6 stirred and warmed with 0.5 g. NaH (N atmospheric), the red paste stirred 1.5 hrs. at 50° in 10 ml. C_6H_6 and treated successively with 3 ml. AcOH and 30 ml. H_2O, the H_2O-washed C_6H_6 layer extracted with 100 ml. 10% aqueous Na_2CO_3, the alkaline extract acidified, and the precipitate recrystd. (EtOAc) gave material, m. 101.5-2.5°, repeatedly recrystd. (C_6H_6-ligroine) to give 6-hydroxymethylene-9-phenyl-5-benzosuberone, m. 102.0-2.5°. Attempts to apply the same conditions as used for Reformatskii reaction of II with Ph_2CO to the reaction of II with the methoxy-substituted benzophenones found to condense readily with I gave only very small quantities of crude resinous products. An alternate pathway to the preparation of diarylvaleric acids was investigated starting with VIII, prepared by the Reformatskii reaction of III with I. $LiAlH_4$ (3.3 g.) in 400 ml. anhydrous Et_2O stirred with addition of 29 g. VIII in 110 ml. Et_2O at a rate to maintain gentle refluxing, the mixture refluxed 1 hr., treated cautiously with EtOAc and 200 ml. cold 3N HCl, the aqueous phase extracted with 150 ml. Et2, the combined Et_2O solns. washed (H_2O), dried ($MgSO_4$) and evaporated, the viscous residue taken up in Et_2O, and

the solution kept at -5° gave 85% (p-MeOC6H4)2CH(CH2)2OH (XV), m. 54-5° (Et2O); 3,5-dinitrobenzoate, m. 116-17° (C6H6-ligroine). XV (55 g.) in 250 ml. CCl4 at -5° stirred with addition in 2 min. of 27 g. freshly distilled PBr3, the mixture stirred 30 min. and the solution kept at room temperature overnight, warmed 20 min. at 50° and diluted with H2O, the aqueous phase extracted with CCl4, the combined CCl4 solns. washed repeatedly with H2O, the dried solution (CaCl2) evaporated and the residue in 200 ml. absolute alc. distilled azeotropically with 20 ml. dry C6H6 until the distilling temperature reached 78°, the solution refluxed 5 hrs. with NaCH(CO2Et)2 (from 4.6 g. Na, 350 ml. absolute alc., 32 g. H2C(CO2Et)2), the decanted liquid refluxed 2 hrs. with 28 g. KOH in 100 ml. H2O, the mixture concentrated, diluted with H2O, washed with Et2O and acidified, the crystalline product distilled at 240-70°/1 mm., and the distillate crystallized (EtOAc) gave 31% (p-MeOC6H4)2CH(CH2)3CO2H, m. 103.5-4.0°. By the same procedures as used with III, 15 g. Zn, 25 g. IV, and 15 g. I gave V [R = 3,4-(MeO)2 C6H3, R' = 3,4,5-(MeO)3C6H2], dehydrated with 50 ml. anhydrous HCO2H and the resultant yellow liquid hydrogenated in 200 ml. AcOH with 2 g. 30% Pd-C to give 18 g. VII [R = 3,4-(MeO)2C6H3, R' = 3,4,5-(MeO)3C6H2], m. 81.5-82.5° (absolute alc.), hydrolyzed and the product purified by 2 recrystns. (C6H6-C6H14) and drying 12 hrs. at 80°/1 mm. to give the acid IX [R = 3,4-(MeO)2C6H3, R' = 3,4,5-(MeO)3C6H2]. Similarly 15 g. Zn, 21.2 g. p-MeOC6H4Bz and 25 g. I gave 78% V (R = Ph, R' = p-MeOC6H4), m. 79-80° (EtOAc), converted by dehydration, hydrogenation, and hydrolysis to yield 86% IX (R = Ph, R' = p-MeOC6H4), m. 120-2°. Repetition of the same transformations on 8.5 g. 3-MeOC6H4Bz produced 9.1 g. crude yellow acid, m. 92-8°, recrystd. (EtOAc-petr. ether) to give IX (R = Ph, R' = m-MeOC6H4), m. 99-100°. Following the general procedure of Huang-Minlon (C.A. 41, 1649a), 10 g. BzCH2(CH2)2CO2H, 7.5 g. NaOH, 7.5 ml. 95% N2H4, and 80 ml. (HOCH2CH2)2O gave 8.4 g. PhCH2(CH2)3CO2H, m. 56.6-7.5° (Et2O-petr. ether), identical with the product obtained by Clemmensen reduction of the starting material.